

Navy Medicine

September-October 2005



Rocket Surgery in Vietnam

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Departments

2 Department Rounds

Navy Pharmacist's Mate Honored at Dedication of Naval Health Clinic Quantico
Naval Medical Center San Diego Change of Command
Navy Hospital Program Comforts Seriously Ill Patients and Families
Dental Technician and Hospital Corpsman Job Ratings Merger
Wreath Laying Ceremony Held in Honor of Navy Caregivers
Medical Service Corps Celebrates 58th Anniversary
Pensacola Hospital Survives the Wrath of Hurricane Dennis
Explosive Ordnance Device Corpsman Lends Medical Combat Experience to the Fight
Dental Technicians Fighting Plaque in Iraq
DOD Launches Deployment Health and Family Readiness Library
Chief BUMED Takes Helm of all Shore-Based Navy Medical Commands
Naval Hospital Camp Pendleton Welcomes New Commander
CJTF-HOA Assists Djiboutian Vaccination Program
Tricare Passport: Your Guide to Quality Health Care
CNO Makes Delivering Human Capital Strategy a Top Priority

33 Letter to the Editor

34 Book Review

37 Look Back



Cover: LCDR David Taft, MC, at the 1st Medical Battalion Hospital, Danang, South Vietnam. In 1967 Dr. Taft earned the Navy Cross for performing a heroic surgery. Story on page 26. Photo from BUMED Archives.

Features

13 Welcoming Wellness into Navy Medicine
CAPT P.A. Fisher McNulty, NC, USN (Ret.)

16 Electronic Patient Tracking and Metric Management System (EPT-MMS)
LCDR D.E. Schmidt, NC, USN

20 Ascertaining Ground Truth in Remote Sensing: Malaria Threat Assessment by NAMRU-2 in Indonesia
LT C.A. Stoops, MSC, USNR

24 NSHS Portsmouth Has a New “IDEA” for Staff Development
M. Dove
HMC C.N. Butler, USN
CDR A.D. Elum-O’Neal, NC, USN

26 Rocket Surgery

28 A Navy Surgeon on Olympus: Notes on the Life and Times of Dr. William P.C. Barton
A.B. Sobocinski



The July-August issue of *Navy Medicine* featured as its cover story the TQ Surgical Shock Trauma Platoon, Combat Logistic Regiment-25, Camp Taqaddum Iraq. In July GEN Michael W. Hagee, Commandant of the Marine Corps, visited the unit. CAPT Kevin Knoop, MC, OIC, and members of the unit, presented GEN Hagee with a copy of the issue. Photos by LT Corey Jago, NC, USNR.

Navy Pharmacist's Mate Honored at Dedication Ceremony of Naval Health Clinic, Quantico

Naval Medical Clinic Quantico was renamed the John Henry Balch Clinic during a dedication ceremony 21 July. The clinic is part of Marine Corps Base Quantico (MCBQ), VA.



Balch Receives the Medal of Honor from RADM F.B.Bassett at the Chicago, IL, YMCA in September 1919. The photograph was donated to the Naval Historical Center in 1974 by CDR John Balch, USN (Ret.)

Under a humid and hazy sky, LCDR J. Lynch, Master of Ceremonies, welcomed clinic and base personnel and honored guests to the dedication ceremony. Among the honored guests was Dr. Clyde Balch, nephew of John Henry Balch, and his family.

Not long after the beginning of World War I, Balch answered the call to serve the nation by enlisting in the Navy. He served as corpsman, then a pharmacist mate, and after he received his medical training, Balch was assigned to the Sixth Marine Regiment at Quantico.

Balch received a Medal of Honor for his courageous service at the battle at Vierzy, France, when he risked his life to save his fellow Marines wounded in battle.

He exposed himself to machine gun and high explosive fire, leaving his dressing station to provide medical treatment to fallen Marines and continued treatment to the wounded for a 16-hour period.

On 5 October, Balch also exhibited his unyielding commitment to providing medical care to injured Marines at Somme-Pay where he established an advanced dressing station under heavy shellfire.

"During World War I, while serving in the field with the Sixth Regiment Marines, Balch was doing the same mission that corpsmen are doing today, helping Marines. Eighty-seven years ago this month, John Henry Balch risked his life to help the Marines in action at Vierzy, France," said CAPT Jane Przybyl, commanding officer, MCBQ. "We are here to look back on that day and honor this courageous corpsman who took care of Marines. We are also here to pay tribute to the corpsmen of today, who train to go into harm's way with Marines."

In the ceremony's closing, Przybyl and Dr. Balch, with help from his grandson Austin, unveiled a plaque dedicated to Balch's service that was mounted on the front of the clinic.

The John Henry Balch Naval Health Clinic Quantico opened 5 years ago in July 2000. □

—Story by Christine Mahoney, Public Affairs Office (M09BK2), Bureau of Medicine and Surgery, Washington, DC.

Naval Medical Center San Diego Change of Command



RDML Brannman assumes command of NMCSO.

RDML Brian G. Brannman assumed command of Naval Medical Center San Diego (NMCSO) during a change-of-command ceremony at the hospital 24 June.

Brannman succeeded RADM John M. Mateczun, who became Deputy Surgeon General of the Navy in Washington, DC.

Mateczun commanded NMCS D during periods when 25 percent of the staff was deployed in support of the global war on terrorism and tsunami, earthquake, and humanitarian aid missions to Southeast Asia.

"This crew is absolutely fabulous," said Mateczun. "We serve almost as many patients as Bethesda and Walter Reed hospitals combined, and we kept up that amazing level of service even with a thousand service members deployed. This has been the best job in my naval career. There will be no better."

Prior to assuming command of NMCS D, Brannman served as executive officer of Naval Hospital Bremerton, WA; commanding officer of U.S. Naval Hospital Okinawa, Japan; and director of Medical Resources, Plans, and Policy Division, Bureau of Medicine and Surgery, Washington, DC.

"It is an honor for me to be at this command," said Brannman, "I look forward to working with this team. The future will have challenges, and I know we will rise to the challenges with bravery and compassion." □

—Story by JO2 Megan T. Figuly, USN, Public Affairs Office, Naval Station, San Diego, CA.

Navy Hospital Program Comforts Seriously Ill Patients, Families

A program initiated in May at the National Naval Medical Center (NNMC) now offers patients facing chronic and life-threatening illnesses extra comfort and personal support while receiving care at the hospital.

The program, called the palliative care program, extends additional medical care, counseling, and transitional assistance to patients and their families who are receiving treatment for chronic or long-term illnesses.

Palliative care is medical care provided by an interdisciplinary team, including the professions of medicine, nursing, social work, chaplaincy, counseling, nursing assistants, and other healthcare professions. It focuses on the relief of suffering and support for the best possible quality of life for patients and their families.

"Many patients are at NNMC due to a health crisis," said Palliative Care Program Manager Jerry Waddell. "Crises force confrontation with the reality of illness and the decisions that need to be made about care."

The hospital's new interdisciplinary team approach is designed to help medical specialists work together to better advise patients and families on pain and symptom management. The group also teams up to offer social, spiritual, psychological, and emotional support. Their goal is to identify and address the physical, psychological, spiritual, and practical burdens of illness that coincide with the patient's existing medical care plan. Palliative care proponents feel this type of treatment plan can actually help improve the physical as well as emotional health of seriously ill patients.

"The *New England Journal of Medicine* released a study last year that showed cancer patients receiving palliative care during their treatments are more likely to complete their cycle of treatment, stay in clinical trials, and report a higher quality of life than similar patients who did not receive palliative care," Waddell said.

NNMC's adoption of the new program responds to a growing need in the healthcare industry—its aging population. By 2030, the number of people in the U.S. over the age of 85 is expected to double to 8.5 million, according to statistics released by the Robert Wood Johnson Foundation, which focuses on improvements in long-term healthcare for dying persons and their families.

"The hallmarks of palliative care—communication and coordination, combined with excellent medical care—ensure that hospital patients have smooth transitions between the hospital and appropriate services, such as hospice, home care, or nursing homes," Waddell added.

"The center's new palliative care program shows we truly are committed to family centered care," said RDML Adam Robinson, commander, NNMC. "From birth to death, we are there with our beneficiaries every step of the way." □

—Story by Ellen Maurer, Public Affairs Office, National Naval Medical Center, Bethesda, MD.

Dental Technician and Hospital Corpsman Job Ratings Merge

In order to provide Sailors and Marines with the finest in medical operational readiness, the Bureau of Medicine and Surgery (BUMED) announces the merger of dental technician (DT) and hospital corpsmen (HM) job ratings into the HM rating. The approval was signed by Chief of Naval Operations, ADM Mike Mullen, 25 July 2005.

"The DT/HM merger combines forces to better meet the demands and needs of our changing Navy. When

the merger is completed it will allow us to better support our operational forces by ensuring all enlisted medical personnel have the same baseline of training; by improving flexibility in the utilization of all enlisted manpower, and by improving career opportunities for all our Sailors. Our most important consideration during this process is the professional development and career enhancement of each and every member of the Hospital Corps,” said Force Master Chief Jacqueline DiRosa, Director, Medical Department Enlisted Personnel.

Nearly 3,000 DT and 24,000 HM active and reserve personnel will be affected by the ratings merger. BUMED has been proactive in preparing these two Navy medicine communities. “In September, 2004, BUMED hosted a Hospital Corps Summit in conjunction with the Naval Medical Education and Training Command to review the current HM and DT ‘A’ school curriculums to plan for needed changes and develop an implementation strategy,” said DiRosa. “I made certain I got a lot of our junior Sailors and senior enlisted in both the DT and HM communities involved in working groups. They, in turn, took the message out to the fleet.”

Training for Sailors newly recruited into the hospital corpsman field will combine both HM and DT job ratings skills. “There will be changes starting with the HM and DT ‘A’ schools. The revised HM ‘A’ school training plan incorporates foundational dental knowledge, skills and abilities. These classes will be added while keeping the HM ‘A’ school length to 14 weeks,” said DiRosa. “Upon completion of HM ‘A’ school, designated personnel will attend a follow-on dental assistant school to train in specialized dental assisting skills. Hospital corpsman training and education will continue at our Great Lakes, IL, medical training facilities until otherwise decided.”

Current DT and HM rated Sailors, and their commands, are responsible for conducting education and training on each respective medical field to ensure they achieve operational readiness. “Current DT and HM Sailors need to review the DT and HM rate training manuals and learn from them. Some DT and HM basic skills training can be conducted at the local command level. Commands should make certain these Sailors know what they need to know concerning DT and HM fundamentals and basic skills.”

The DT/HM rating unification is expected to take place over the next 2 years. Once complete, all Navy medicine DTs and HMs will be known as the HM community.

Please note: a NAVADMIN message will be forthcoming officially announcing the actual effective date of the ratings merger and the specifics regarding combined

advancement exams, selection boards, and rating badge change requirements.

For additional information on the ratings merger, please visit the HM/DT community web page at the Center for Force Health Protection via NKO at wwwa.nko.navy.mil. □

—Story by Christine Mahoney, Public Affairs Office (M09BK2), Bureau of Medicine and Surgery, Washington, DC.

Wreath-Laying Ceremony Held in Honor of Navy Caregivers

Navy medicine commemorated the 107th anniversary of its Hospital Corps and paid tribute to Sailors who provided medical and dental care to their fellow service members with a wreath laying ceremony at the Navy Memorial 15 June.

Although not officially established as the Hospital Corps until 1898, Navy medicine Sailors have provided care to their fellow Sailors and Marines since the dawn of the U.S. Navy. With a force of 23,000 active duty and Reservists members, the Hospital Corps officially celebrated its birthday on Friday, 17 June.

RADM Richard A. Buchanan (Ret.), President and Chief Executive Officer of the United States Navy Memorial hosted the event. RADM Nancy Lescavage and Department of the Navy Bureau of Medicine and Surgery (BUMED) Force Master Chief Jacqueline L. DiRosa were honored guests and participants in the ceremony.

“The Navy Medical Department plays a very important role in our service members lives. Whether in com-



bat, on a ship or at a medical facility, corpsmen are relied upon to keep those individuals operating on our ships and around the world healthy, and often mending the wounds that help keep them alive,” said Buchanan. “These Sailors have proven time and time again that they are willingly accepting this responsibility and continually perform on a level far above what is expected of them. In addition, service members place trust and their confidence in them, to take care of one of the most important things in their lives, their families.”

With the Color and Honor Guards standing at attention on both sides of the Lone Sailor statue, a wreath with red and white flowers was placed at the foot the statue. The wreath is a token of honor to all hospital corpsmen, past, present, and future.

“Today we celebrate 107 years of service, service above and beyond the call of duty. Whether it is on the battlefield or at sea, whether it is at home, or a humanitarian relief effort, Navy medicine and our Hospital Corps are always there,” said DiRosa. □

—*Story by Christine Mahoney, Public Affairs Office (M09BK2), Bureau of Medicine and Surgery, Washington, DC.*

Medical Service Corps Celebrates 58th Anniversary

The Navy celebrates the 58th year of its “newest” staff corps 4 August. During this time, the Medical Service Corps has emerged as the integral mechanism in the Navy medical machine. As we mark another year of the Corps’ growing tradition of excellence, let us not forget the true origins of this Corps.

With the outbreak of World War II, the Navy’s need for skilled medical managerial officers was resolved by

appointing temporary commissions to individuals trained in administrative and scientific specialties. Some 1,429 individuals, mostly from the ranks of the enlisted, were appointed Hospital Corps officers. Their wartime roles were spent demonstrating expertise in medical operational planning, procurement, accounting, food service, personnel management, and facilities maintenance. Additionally, over 800 Naval Reserve officers were brought on board with the designation of hospital volunteer specialists (H-V(S)).

The work of these Hospital Corps officers proved so invaluable that following the war, when the nation had shifted into an era of defense and demobilization, Surgeon General Clifford Swanson, MC, sought to maintain this cadre of knowledge and talent by establishing a permanent commissioned grade of “Medical Administrator” in the Hospital Corps and the “Medical Associated Sciences Corps” within the Navy.

On 4 August 1947, the Army-Navy Medical Services Corps Act was signed into law by President Harry Truman.

The personnel of the Navy’s Medical Service Corps were limited to 20 percent of the authorized strength of the Medical Corps. The new officers of the Medical Service Corps served in one of four specialty sections: medical allied sciences, pharmacists, optometrists, and supply and administration.

Today there are some 2,560 Medical Service Corps officers serving the Navy in over 22 specialties on multiple platforms. □

—*Story by André Sobocinski, Historian’s Office, Bureau of Medicine and Surgery (M09B7C), Washington, DC.*

Pensacola Hospital Survives the Wrath of Hurricane Dennis

Naval Hospital Pensacola sustained only minor damage following a close encounter with Hurricane Dennis and its 125 mph winds 11 July. The tightness of the storm’s eye—about 20 miles across—and its near-shore wobble to the east of Pensacola averted a second direct hit hurricane to the facility in the last 10 months.

The hospital, which sustained nearly \$3 million in damages at the hands of Hurricane Ivan nearly 10 months ago, developed some “new leaks and some old leaks,” said CAPT Matt Nathan, commanding officer.

“We are in the military healthcare business and as a result we get ourselves ready for business ahead of all others—it is the hallmark of what we do,” he said. “Those



In July 1941 legislation authorized the temporary appointment of commissioned officers in the Hospital Corps. Above are industrial hygiene officers at Columbia University in August 1942.

who rely on us truly are grateful in the way we put others first.”

“Our facility did well except for some leaks and roof damage,” said Nathan. “I want to salute and recognize all the staff, military and civilian, for their responsiveness and commitment.”

The hospital housed nearly 300 people over the weekend for 2 days under stressful mental conditions, including 12 obstetric patients at 36-plus weeks and their family members. Last September 16-17 during Ivan, the staff was onboard for 4 consecutive days. □

—Story by Rod Duren, Public Affairs Office, Naval Hospital Pensacola, FL.

Explosive Ordnance Device Corpsman Lends Medical Combat Experience to the Fight

Hospital corpsmen are an essential part of an explosive ordnance disposal (EOD) team, which can deploy at a moments notice. HM2 Jason Hall, with the Marine Wing Support Squadron 271 (MWSS 271) explosive ordnance disposal (EOD) team, is ready to provide emergency medical assistance to the team when the situation arises.

“I’m attached to the team as their first line of medical care in the event something goes awry,” Hall said. “Our team is on call 24 hours a day. If we get a call at 3 in the morning we have to go. Our mission is vital to the safety of all service members who may come in contact with an improvised explosive device.”

The disposal team has two corpsmen attached to it so they are able to rotate shifts and calls.

“Usually just one of us goes with a portion of the team, but there have been cases when the whole team was called so both of us will accompany them on their mission,” said Hall.

Hall joined the squadron and started preparing for this deployment in January 2005. He was selected to work with the EOD team because of his knowledge and combat experience gained when he supported Operation Iraqi Freedom in 2003 with 2nd Tank Battalion.

Working with Marines is something Hall has always enjoyed. He has loved the camaraderie of Marines since he was a new corpsman at Marine Corps Recruit Depot, Parris Island, SC to serving with the MWSS 271 EOD team today.

“I think being a corpsman in the Fleet Marine Force is a great way to do a variety of things and advance your knowledge of the field,” Hall said. “Working with the explosive ordnance disposal team you get to know these Marines on a different level while they fulfill their many missions throughout the country.”

The corpsmen attached to explosive ordnance are more than just your average “doc.” When responding to a call they may assist the explosives experts in any part of the mission.

“Our corpsmen are an invaluable part of our team,” said GSGT Hal White, the disposal team officer-in-charge. “They have the ability to set up and operate any piece of gear we use. They lend a hand to us as well as stay alert to the entire situation in case they need to spring into action. They also carry weapons and provide extra security for our vehicles when we travel.”

Having a corpsman who has experienced combat and knows how to react when the situation deteriorates is a welcome addition to any team. The knowledge and skills Hall brings to the fight are a standard in Navy medicine. The Marines whose lives may depend on him are proud to have him along during every call. □

—Story by CPL C. Alex Herron, 2nd Marine Aircraft Wing, Cherry Point, NC.

Dental Technicians Fighting Plaque in Iraq

More than 30 Sailors with 2nd Dental Battalion, 2nd Force Service Support Group (FSSG), completed a field exercise conducted at Camp Lejeune 11-27 July.

The Sailors used the field as an office to conduct actual dental work on Marines to help familiarize the dental technicians with the equipment they will be using in Iraq when they deploy for Operation Iraqi Freedom III, according to CAPT Andrew D. Peters, DC, dental detachment commanding officer with Headquarters and Service Battalion, 2nd FSSG.

“We are here to serve the Marines so they can continue to do their jobs well,” Peters said. “Our job is to measure operational dental readiness for everyone deploying to Iraq.”

The mission of these Sailors is to utilize the authorized dental allowance list (ADAL). The list is comprised of new dental equipment specifically being used by dental technicians in Iraq.

The ADAL equipment is pertinent to service members in the field because it is lightweight and easily maneuver-



DT Jamal Hawkins (left) and LT John Kim (right) work on patient PFC Darrin L. Ortiz during a field exercise at Camp Lejeune, NC.

able, according to DT3 Raymond A. Vaclavik with the 2nd Dental Battalion, 2nd FSSG.

Throughout the training exercise, Marines routinely had their teeth cleaned in the field by dentists who were using the ADAL equipment.

“We had real patients come throughout the day to have their teeth cleaned, cavities filled, and checkups,” said Vaclavik.

By training technicians in this environment, the Sailors will be more knowledgeable in how to conduct field dental techniques once in Iraq, according to Peters.

Once the Sailors’ boots hit the Iraqi sand, they will be prepared because the gear they are training with in garrison is already waiting for them there, Peters explained. “Marines will get their teeth taken care of differently while in the theater,” Peters said. “However, the quality in the dental care will be the same.” □

—Story by LCPL Joel Abshier, 2nd Force Service Support Group, Camp Lejeune, NC.

DOD Launches Deployment Health and Family Readiness Library

The DOD Deployment Health Risk Communication Working Group and the Joint Task Force for Family Readiness Education on Deployments have joined together to create the Deployment Health and Family Readiness Library.

The new on-line library, announced by the Deputy Assistant Secretary of Defense for Force Health Protection and Readiness, Ellen P. Embrey, is intended to provide service members, families, and healthcare providers a quick and easy way to find the deployment health and family readiness information they value.

“Information is a powerful tool. We must remain proactive in providing deployment-related health information to better safeguard our service members,” she said. “Most people fear the unknown. Through accurate, timely information we are able to ensure that our service members are better equipped to prepare for, cope with, and recover from the myriad health risks faced during deployments.”

The contents of the library include fact sheets, guides, and other products on a wide variety of topics. The topic listing was based on feedback from service members, their families, and healthcare providers, Embrey said. New information will be added to the site as new topics and areas of concern emerge.

In focus group meetings service members and their families have said their need for information varies before, during, and after deployments. Service members—leaders in particular—look for accurate information before the deployment. While deployed, families are especially interested in getting deployment health-related information. Following deployments, both service members and families look for this information. Embrey said that there are many information sources available on-line but noted that, too often, it’s difficult to tell if the information source is accurate.

“We are absolutely committed to providing the best information found in sound science and based on medical evidence,” Embrey said. “We want this site to be the authoritative source for deployment health and family readiness information. This is another step we are taking to ensure that those who protect our country and our freedoms are also protected.”

Deployment Health and Family Readiness Library—<http://deploymenthealthlibrary.fhp.osd.mil>. □



CNO Mike Mullen congratulates HM3 Jonathan D. Bryant after he awarded him the Purple Heart 19 August during an admiral's call at the Naval Aviation Memorial Chapel onboard Naval Air Station Pensacola, FL. Photo by JO1 Russell C. Tafuri.



Tawi Tawi Philippines: LT Jaime Barata, MC, assigned to USS Tarawa (LHA-1) check a Batu-Batu native for possible upper respiratory infection. Photo by CPL Andy Hurt, USMC



San Narcisco, Philippines: LT Adrian F. LePendu, DC, and DT3 Cassandra Herring treat a patient during a combined medical and dental civic action project as part of the Philippines phase of CARAT 2005. Photo by JO2 Brian P. Biller.



President George W. Bush and National Naval Medical Center Commander, RDML Adam Robinson, exit the hospital following the president's successful annual physical 30 July. Photo by JO Heather Weaver, USN.

LT Allison Schwartz, assigned to USS Boxer (LHD-4) is assisted by DT2 Andrew Custdio, as she cleans the teeth of a Malaysian Armed Forces member during (CARAT). Photo by HM Vernaldo Raymond, USN.





Marines and hospital corpsmen unload wounded Marines from a medical vehicle to stabilize them at the 1/8 Regimental Aid Station before evacuating them to a medical facility. U.S. Marine Corps photo by CPL Theresa M. Medina.



HM Mike Borrall helps a Boy Scout to his feet following a heat related injury during the National Scout Jamboree held at Fort A.P. Hill, VA., 25 July-3 August. Navy Sailors provided medical attention to Boy Scouts for heat related injuries. Photo by PH2 Jayme Pastoric, USN.



At the Surgical Shock Trauma Platoon at Camp Taqaddum, Iraq, most patients arrive by CASEVAC helicopter. However, sometimes another mode of transportation is faster. Here a patient is delivered via Bradley Fighting Vehicle. Photo by CDR Thomas A. Craig, MC.

HM1(SEAL) Jeffrey S. Taylor, 30, of Midway, WV, died 28 June at Asadabad, Afghanistan. Taylor was assigned to Seal Team Ten. Taylor joined the Navy in 1994. After serving at several duty stations as a hospital corpsman, he graduated from basic underwater demolition school in 2000. He was previously assigned to Seal Team Eight and was a student at the JFK Special Warfare Center in Fort Bragg, NC, prior to joining Seal Team Ten. □



LCPL James Ryan, HM3 Travis Youngblood, and LCPL Andrew Wathen in Haditha, Iraq 2005.

HM3 Travis L. Youngblood, 26, of Surrency, GA, died 21 July of wounds received 15 July from an improvised explosive device during combat operations in Hit, Iraq. Youngblood was a hospital corpsman assigned to Naval Hospital Great Lakes, Great Lakes, IL, and deployed with the II Marine Expeditionary Force. □

Chief BUMED Takes Helm of All Shore-Based Navy Medical Commands

Secretary of the Navy Gordon R. England announced the alignment of all Navy Medical Treatment Facilities command and control under the military command of Chief, Bureau of Medicine and Surgery (CHBUMED). CHBUMED will serve as the primary reporting senior for all Navy medical commanding officers. The realignment went into effect 13 July.

“The Secretary of the Navy has realigned command and control of all of our medical commands under the Chief, Bureau of Medicine and Surgery (CHBUMED). The purpose of this realignment is to provide BUMED the authority to effectively and efficiently direct the collective assets of Navy medicine to maintain readiness and deliver the highest quality healthcare,” said Surgeon General of the Navy VADM Donald Arthur, CHBUMED. “This realignment will be seamless to most members of the Navy medicine community and our beneficiaries, but it will have a positive impact on how we meet our dual mission.”

The goal of the realignment is to provide CHBUMED the authority to effectively and efficiently direct Navy medicine shore-based resources in order to maintain readiness and deliver the highest quality care in the most cost-effective manner.

The realignment follows implementation of fundamental changes in BUMED headquarters organization. The BUMED strategic business planning efforts are more aligned with the operational forces on such key components as combat service support, comprehensive healthcare for wounded service members, patients access, productivity standards, and fiscal controls.

Also, the recent functional realignment of the headquarters ensures Navy medicine is prepared to meet future challenges in the global war on terrorism and provide world-class healthcare to our eligible beneficiaries.

Navy medicine exists to support the Chief of Naval Operations and the Marine Corps Commandant’s joint-vision of the Navy-Marine Corps Team. Navy medicine is entrusted with the administering the best in healthcare to our Sailors, Marines, families, and retirees. □

—Story by Christine Mahoney, Public Affairs Office (M09BK2), Bureau of Medicine and Surgery, Washington, DC.

CJTF-HOA Assists Djiboutian Vaccination Program

Children across Djibouti are being vaccinated against polio as part of a nationwide Djiboutian government program they are being assisted by the Combined Joint



CAPT Chris Stratford, USAF, flight nurse, distributes polio vaccine to children in Goubetto.

Task Force—Horn of Africa as well as French and German military members, the World Health Organization, the United States Agency for International Development, and other non-government organizations.

The Djiboutian government enacted the preventive program as a reaction to outbreaks of the disease in neighboring countries frequented by nomads from Djibouti.

According to CDR Randal LeBlanc, CJTF-HOA Surgeon Cell, there have been over 60 cases of polio in Yemen and Ethiopia, prompting the Djibouti Ministry of Health to take a proactive approach to ensuring its children were vaccinated. CJTF-HOA is assisting with the program in the southernmost province of Ali Sabieh, with other organizations conducting similar operations simultaneously throughout the country.

While polio vaccine has always been available in Djibouti, this is the first time a nationwide campaign was conducted to vaccinate all children in the country at once.

“It is important to protect our children,” said Djiboutian Army Chief Surgeon Ali Dalieh Kidar. “The Djiboutian Army and United States Army have a good relationship and are able to fight this disease.”

The CJTF-HOA teams are made up of members from the 96th Civil Affairs Battalion, CJTF-HOA Surgeon Cell, Emergency Medical Facility, 379th Expeditionary Aeromedical Squadron from Qatar, and supported by Team Alpha, 1-294th Infantry (Light) and other CJTF-HOA elements. The teams also worked in cooperation alongside members of the Djiboutian and German militaries.

“This is a humanitarian mission, and so everyone is ready and willing to help,” said MAJ Robbie Kiermayr, Detachment Commander, 96th Civil Affairs. “But the best

thing that comes out of this is that it shows Djiboutians that their government cares and is able to coordinate care for them.”

But the project also gave a lot of personal satisfaction to those who were able to help.

“This was my first time treating locals,” said CAPT Chris Stratford, flight nurse, 379th EAES. “You don’t think about things like polio coming from the States. It gave us a greater sense of community getting to help those who are poor and less fortunate.” □

—Story by **SGT Brian E. McElaney, USA, CJTF-HOA PAO.**

Naval Hospital Camp Pendleton Welcomes New Commander

CAPT Steven M. Nichols, MC, assumed command of Naval Hospital Camp Pendleton from CAPT Richard R. Jeffries, MC, in a formal Change of Command ceremony held on the athletic field in front of the hospital, 27 July.

Since 2001, NHCP has deployed more than 497 staff members to Iraq and Afghanistan. The hospital has approximately 2,000 active duty and civilian staff to service a 164,000 patient base.

The biggest challenge, said Jeffries, was changing the hospital from a peacetime operation to a wartime operation.

“We had an increase in mission on many fronts, from medically screening hundreds of activated reservists, to taking care of war casualties, as well as deploying our own, and all while still taking care of our enrolled Marines, Sailors, retirees, and all of their family members,” Jeffries said.

Jeffries has been selected for RDML and is moving to head a newly formed Future Plans and Strategy office at the Bureau of Medicine and Surgery in Washington, DC.

Nichols’ last command was Naval Hospital Camp Lejeune in Jacksonville, NC, where he served as the executive officer. In his remarks, he stressed the importance of communication and the Navy’s core values of Honor, Courage, and Commitment. □

—Story by **Douglas W. Allen, Naval Hospital Camp Pendleton Public Affairs Officer**

Tricare Passport: Your Guide to Quality Health Care

TRICARE is providing active duty service members and their families with a new tool to access their healthcare.

The TRICARE Passport is now available at TRICARE Service Centers and Military Treatment Facilities (MTFs). The guidebook outlines TRICARE's programs, including Dental Care and overseas travel, in a compact format.

"TRICARE wanted to provide active duty military members and their families with an easy-to-use information booklet in a simple format that is easy for the member to access," said HM1(FMF) Douglas Elsaesser, Navy Bureau of Medicine and Surgery's (BUMED) TRICARE Marketing Education Council Representative. "The Passport provides a brief overview of each TRICARE program."

"It also includes information on how to handle a medical situation if a Sailor is deployed overseas, getting prescriptions filled while on the road, and information for family members," Elsaesser continued.

Members of the Reserve component who are activated for more than 30 consecutive days, plus their families, are considered "active duty" and have access to TRICARE benefits for themselves and their families and can also utilize the Passport to acquire information.

For service members overseas, the TRICARE Passports are available at MTFs by request only.

If you would like to obtain a copy of the Passport, visit your local area TRICARE Service Center or MTF.

The Passport is also available online at the TRICARE website www.tricare.osd.mil. □

—Story by Christine Mahoney, Public Affairs Office (M09BK2), Bureau of Medicine and Surgery, Washington, DC.

CNO Makes Delivering Human Capital Strategy a Top Priority

Chief of Naval Operations (CNO) ADM Mike Mullen told manpower and personnel officials on 10 August the time is now to deliver a comprehensive 21st Century Human Capital Strategy (HCS) for Sailors.

"I've been on record saying that sustaining our readiness and building the fleet for the future are two of my top priorities, and they are," Mullen said. "But I don't think we can accomplish either one without a strong focus on our people and their families. Getting it right for them in the future is what the Human Capital Strategy is all about, and I am interested in stepping out on it."

Mullen made his remarks to the HCS Symposium at the Naval Postgraduate School in Monterey, CA, 10 August. It was the third such symposium Navy leaders have conducted.

"This symposium builds on the great strategy work done to date and is an excellent forum to educate the cadre of specialists, provide a valuable opportunity to network with other members, and lay the groundwork for the working-level meeting in December," said Chief of Naval Personnel VADM Gerry Hoewing.

The HCS is designed to provide overall guidance to achieve capabilities based and competency focused workforce alignment with joint and Navy mission requirements.

Mullen said the HCS must include a focus on continuing education, executive development, and duty in joint billets.

"We have amazing talent in the Navy," Mullen said, "and we need to continually look for ways to send that talent to challenging, meaningful, joint duty. It's a joint world out there, and it's getting more joint every day. The war on terror proves that."

The CNO also said he was looking for ways to improve diversity across the Navy. He noted the contributions of the year-old Diversity Directorate in increasing awareness but pledged his support to doing more.

"We need leaders for and from every part of our Navy. I want to take big steps each year to improve our diversity, especially in leadership positions, and I want a human capital strategy that helps us do that."

He praised the progress made on HCS and thanked the symposium attendees for their dedication. He also charged them to keep up the pace and encouraged them to try out new ideas on their own as they develop the strategy.

"Don't wait for me," he said. □

—Story by Chief of Naval Operations Public Affairs

Welcoming Wellness into Navy Medicine

CAPT Peggy Anne Fisher McNulty, NC, USN (Ret.)

Nurse practitioners have long been credited for the incorporation of wellness into their patient's visits. The model has existed since the early days of Florence Nightingale during the Crimean War. The challenge for many providers has always been how to incorporate wellness into a medical model of episodic care. This problem has been successfully addressed by the opening of the Navy's first Welcoming Center for total comprehensive health review of each new Active Duty (AD) and family member entering the medical system at Pearl Harbor, HI.

Headed by a nurse practitioner, the center has seen over 7,000 new members since opening in January 2004. The staggering statistics emphasize the importance of having this service available at all medical treatment facilities worldwide.

It is no secret that prevention is the solution for improved longevity of life, enhanced quality of life, and enormous health cost savings. Research has documented these findings but common sense also dictates that we take this to heart in medical practice. It is the model for all nurse practitioners and bears repeating. A minor stroke creates hundreds of thousands of dollars in health related costs coupled with a dramatic change in the quality of life. Yet, where are we today in military medicine? Sadly, we are only at the edge of top performance when it comes to health prevention and promotion. There truly is room for improvement at many levels of care.

We have all heard stories about young men and women who drop to the ground while either attempting to do the physical fitness run or during regular physical fitness sessions. This occurs not only in the military but also in reports of young athletes on high school teams. There have also been reports of men and women with tragic deaths associated with heart defects that were not recognized earlier in their medical assessments. These occurrences can be avoided if proper health maintenance is reported and addressed.

In an effort to place prevention at the forefront at Naval Health Clinic Hawaii, a new center for welcoming new arrivals to wellness and Hawaii was conceived in August 2003 under the direction of CAPT Joseph Moore, MC, then commanding officer and currently under the direction of commanding officer CAPT Charles Barker, MC. This center boasts outcomes of immense significance in the quantity and quality of preventive services generated and provided for not only active duty population, but for their entire family.

Welcoming Center

When family and service members report to sign up for Tricare, they are immediately directed to this center. The "E Komo Mai Center," Hawaiian for "Welcoming Center" is much more. Check-ins average 30 per day. Once Tricare is established, records are made and readiness is evaluated for the active duty member including data entry into the readiness files.

Immunizations, DNA, and HIV status are verified. Family members and active duty are interviewed separately for health concerns including their health history, family health history, immunization status, and psycho-social assessment by the use of the standard form on the cover of each medical record (SF 2766). Active duty members are assessed by an additional evaluation to include the Preventive Health Assessment (PHA) for readiness. Forms are completed during a face-to-face interview with a nurse (RN, LVN) who reviews the record for completeness and conducts a full set of vital signs (blood pressure and weight for ages 12 and over), followed by an in-depth interview by a nurse practitioner, independent duty corpsman, nurse, or trained corps staff which lasts approximately 30 minutes. Each client is queried for tobacco, alcohol, drug history, and health behaviors. If needed, counseling is begun and health classes are offered and scheduled.

Particular attention is given to active duty members who have records, looking at the status of their last 5-year physical and addressing any concerns from previous visits. Family members are interviewed with the same detail.

Patients with records are guaranteed a more comprehensive review since the memory is not a valid documentation and many events are long forgotten. It has been our experience that “you catch them while you can.” Patients can be remarkable historians when queried with privacy and time.

Clients choose their primary care managers (PCMs). A book with credentials and provider philosophy is provided, as well as photos, for their review. The patient is then discharged with a “*prescription for care*” summary that is a checklist of healthcare maintenance ordered specifically for each patient. This is based on an assessment by age, current and previous healthcare history, and anticipatory guidance recommendations for children, teens, and adults.

Essential and/or abnormal laboratory tests, such as lipids, chemistries, liver and renal function tests, immunizations, X-rays, mammograms, and consults for services needed are ordered appropriate to each case as determined by the interviewer with provider guidance. The client is given his/her first appoint-

ment before leaving with a personal copy of their individualized “*prescription for care*.” In this manner, the patient will report to their first appointment with their new provider after lab work is obtained, thereby allowing improved and more efficient access to care. Since the initial appointment to assess and order is already completed, this first appointment with the new provider is well utilized since the lab results are ready for review.

The final step for the process of being welcomed to shore base commands and Hawaii is the discharge instructions. A nurse (RN, LVN or corpsman) reviews the “*prescription for care*” sheet, giving directions for all items ordered, including times for fasting, and details for follow-up mandated for their health. Maps are given for the medical clinical services. Clients are also enrolled on the spot for classes such as Healthy Heart, Ship-Shape, and Tobacco Cessation. A room designed for wellness is also located at the Welcoming Center, and family members can easily pick up brochures or borrow videos specific to their needs. This room also houses a play area for young children so the parents can concentrate on filling out forms and health history while their child safely plays with safe, washable items that easily capture a child’s energy and attention.

Statistical Analysis

Overall, since opening, nearly 7,000 patients have been processed through the Welcoming Center, Naval Health Clinic Hawaii. Active duty represents 46 percent, spouses 24.5 percent, children 29 percent, and retirees 0.5 percent. Males accounted for 51 percent of the population.

Routine Health Care

Mammograms are recommended for all women 39 years or older for breast cancer prevention. Annual breast exams are also scheduled. Women with a family history of breast cancer are screened by mammography earlier than age 39 as determined by provider. All women who are sexually active are screened annually for a routine pap test and after documentation of three normal paps; the interval may extend to every 2 years. Regardless of whether a pap is done, an annual pelvic

exam is always indicated and scheduled. In the population screened at the Welcoming Center, the following statistics were revealed:

In the population of active duty females over the age of 39, 68 percent needed their mammogram; that meant 48 out of 71 did not have a mammogram when needed to help detect cancer risk. Of the female spouses, 86 of 152 in that age or 57 percent lacked mammogram screening. Breast exams were deficient in 38 percent of active duty females and at 49 percent of female spouses. Females deficient in pap testing were at 42 percent in the active duty population and at 52 percent of spouses.

The recommended annual prostate check at age 40, for males, fell short for compliance. In the active duty population in this age category, 104 of 380, or 27 percent lacked their prostate exam. Male spouses were deficient 36 percent in this age group. When family history dictates, this exam is performed earlier than age 40. A prostate exam is essential and should be taken seriously by all men in this age category. In addition, monthly self-testicular checks are encouraged and pamphlets are given so that each man evaluated knows the proper method to detect any lumps or abnormalities in the testes.

The Wellness Center located adjacent to the Welcoming Center also houses videos on this exam for self-learning which can be viewed at any time by clients upon request.

The center also has information regarding all diseases with appropriate handouts and videos.

Immunizations

Forty-five percent of all active duty members needed at least one immunization and 29 percent needed PPDs for tuberculosis screening. This compared to 17 percent of family members who needed shots and 30 percent who needed PPDs.

Cholesterol

Cholesterols were ordered for 681 spouses and 930 active duty members; 41 percent of active duty needed cholesterol screening and 3 percent had documented abnormal high values unknown to them. An additional 5 percent had high values that failed follow-up by the patient. Spouses needed testing at 49 percent and 1.5 percent had abnormal high values unknown to them while 2.2 percent had high values known to them.

Blood Pressure

Hypertension screening revealed 9 percent of all active duty was at risk and 3 percent of spouses needed follow-up for high recordings. Although screening was done and concerns for blood pressure were determined, less than 50 percent of those given appointments for follow-up kept their appointments.

This center has proven its effectiveness in the promotion of wellness and disease prevention. In the short period of its existence, active duty service members and their families are becoming healthier with risk identification and intervention that might easily have been missed. □

CAPT McNulty is retired and lives in Hawaii.

Electronic Patient Tracking and Metric Management System (EPT-MMS)

LCDR Christopher E. Schmidt, NC, USN

Appplied information technology (electronic patient tracking, medical records, metric management, and patient education) within the Emergency Department (ED) setting has become a growing trend in the U.S. over the past decade. Roughly, only 31 percent of EDs nationwide have incorporated electronic clinical support systems in medical management operations, according to a recent Center for Disease Control and Prevention study.⁽¹⁾ Patient flow, identification, and team communication, are significant safety issues monitored and advocated by the Joint Commission for the Accreditation of Healthcare Organizations (JCAHO).⁽²⁻³⁾

ED tracking systems are costly and have had difficulty in the past interfacing with the Department of Defense (DOD) electronic healthcare database, Composite Health Care System (CHCS). Several positive features are evident with incorporation of an electronic patient tracking and metric management system (EPT-MMS): mitigation of potential medical errors secondary to enhanced situational awareness (SA); improved patient throughput times, maximized

clinical resources, expeditious data recall for administrative management purposes, and demonstrated return on investment (ROI) through reduced lengths of stay (LOS), resulting in improved satisfaction, and decreased potential for patients who leave prior to treatment (LWBS).

Background

Naval Hospital Jacksonville (NHJAX) ED cares for more than 55,000 beneficiaries annually and is the third busiest ED in Navy medicine. The department's method of patient flow management involved use of a whiteboard to annotate clinician assignment and patient placement; it used CHCS for order entry and data retrieval. The system presented several problems for ED personnel such as omission errors resulting in missed medical directives, significant delays in lab processes resulting in prolonged LOS, limited data due to privacy issues, and loss of SA during high volume, high acuity periods.

Initiative

Expanding on an idea brought forth by the Head of the NHJAX

laboratory, and a past process improvement initiative from the ED administrative leadership at Naval Medical Center Portsmouth, VA, leadership of the ED, radiology, and laboratory met in January 2003 with members of NHJAX Information Resources Management Department (IRMD) to brainstorm creation of a web-based electronic patient tracking system capable of integrating the ED and ancillary departments, to support ED processes and expedite patient throughput. Over the past 2 years the team developed and implemented a multifunctional EPT-MMS that is positively affecting quality patient care and risk management concerns, enhancing SA for ED personnel, and improving beneficiary satisfaction. It was built at a significant cost savings from having to purchase a similar off-the-shelf product.

EPT-MMS is linked to CHCS via the software program CACHE.TM CACHETM extracts CHCS information and places it in a separate database specific to ED workload. The system also utilizes MDE (MUMPS data extractor), Microsoft SQL server, and CRYSTAL Reports MDE extracts metric data from

CHCS and populates a Microsoft SQL server data warehouse. The data warehouse is used to generate statistical reports developed using CRYSTAL reports. CHCS information is refreshed frequently within EPT-MMS. As a result, clinicians, nursing, and hospital corpsmen are provided “real time” data pertaining to patient processes.

The system’s capabilities are numerous. Staff members electronically assign patients to beds, pre-assign beds for inbound ambulances, annotate triage acuity levels, and complaint symbols for quick recall, as well as designate staff members for assignment to specific beds.

Health Insurance Portability and Accountability Act (HIPAA) compliance is maintained using special patient identifiers and strategically locating display screens throughout the ED. CHCS interface allows for current laboratory and radiological study status to be displayed. A series of colored dots alert staff members to the status of studies, enhancing the management of patient disposition. An icon flashes next to any patient returning to the ED within a 72-hour time frame. Length-of-stay clocks built into EPT-MMS warn personnel when a patient has exceeded certain time parameters in the department.

Integration of the EPT-MMS has added several capabilities that were impossible with the whiteboard process. Additional patient cells representative of the ED’s adjoining four-bed, Acute Care Clinic/Fast Track are included in EPT-MMS. ED physicians responsible for medical care are aware of these patients and can manage their processes in collaboration with ACC clinical staff. SA is enhanced in that ED clinicians are able to view

the number of patients awaiting treatment in the waiting room displayed from desktop workstations anywhere in the department. Triage nurses can visualize electronically available treatment beds making it easier to place patients in rooms during emergent situations. Furthermore, triage nurses can assign beds when the charge nurse is clinically involved at a bedside, thus expediting patient throughput. Because the system is Web-based, consultants are able to access and identify which patients require admission. Nursing supervisors also utilize EPT-MMS to analyze need to shift personnel assets within the hospital to the ED to support workload.

Screens were also envisioned and developed specifically for the laboratory and radiology department to provide personnel data as to which studies emanate from the ED, and specifically where each study was in process (i.e. ordered, unacknowledged, pending, uncertified, or complete).

In May 2005, three 20-inch display screens were strategically located throughout the laboratory. The goal was to alert staff members to the presence of ED lab tests without having to access CHCS or be telephoned by ED personnel, thus expediting laboratory response, analysis, and reporting (turnaround time).

The same strategy is soon to be employed in the radiology department.

Statistical information in this era is a paramount concern of all healthcare administrative management. In addition to patient flow management, EPT-MMS is capable of producing a number of reports that have allowed administrators to optimize their systems and desired

outcomes, specifically enhancing quality patient care, productivity, patient satisfaction, and systems optimization. Data extracted and reported from EPT-MMS include daily metrics, both reported and graphed (e.g. daily top 5 ED ICD-9 and CPT codes, daily encounters, and relative value units (RVUs), ancillary costs, LOS, patient disposition, unscheduled return visits within 72 hours, daily peak times, etc.).

Lessons Learned During System Development

Departmental leadership noted quickly that speed or the lack of it severely hampered use of the system. Several staff members became disenchanted with EPT-MMS if it became bogged down with data, thus increasing the time it took to visualize information updates. To improve efficiency and speed, EPT-MMS was moved to its own computer server and the system refresh time was changed from every 30 seconds to once a minute.

To evaluate system modifications as it was being developed, bi-monthly meetings were conducted with members of IRMD. IRMD personnel listened attentively to staff member concerns and made frequent modifications based from input regarding system efficiency during peak patient volume periods, and what staff may have liked or disliked if they used a similar commercial system in a civilian ED. One suggestion put into development was customizing the display field to resemble the floor plan of the department. Any change made was given a minimum 2-week trial period to properly evaluate its effectiveness with the system.

The EPT-MMS inter-departmental performance improvement initiative demonstrated a significant change in culture. For some individuals it was very difficult to shift from reliance upon a whiteboard for patient flow management to use of an integrated computerized screen. To combat resistance and ease transition of using EPT-MMS several strategies were implemented:

1. EPT-MMS was repeatedly a topic at monthly staff meetings. Periodic updates of the project's progress and research noting positive ROI with use of such systems in other EDs re-emphasized to staff members the importance of the issue.

2. The whiteboard remained in place during transition allowing staff members uncomfortable with EPT-MMS to use it as well for documentation.

3. Separate data screens were placed by the computer workstations of the physicians and unit clerks, allowing them to continuously visualize EPT-MMS data while simultaneously referencing specific CHCS data on the other screen.

4. The clinical nurse specialist worked diligently with all ED staff members using formal in-services as well as bedside teaching to highlight the system's capabilities and ensure all were knowledgeable and proficient regarding system functionality.

Limitations of EPT-MMS

Though EPT-MMS has been a positive feature in managing ED processes, there are limitations. The electronic system becomes non-functional when scheduled or unplanned downtime of CHCS occurs, forcing staff to an immediate



Charge Nurse LT Jason Penfold and Staff Emergency Physician CDR Sharon Miller quickly review the EPT-MMS to ensure both are aware of all patients in the treatment area and waiting room.

Photos courtesy of author

reversion back to use of the whiteboard. Copyright laws prohibit writing applications to CHCS. In contrast with several commercial patient tracking software systems, NHJAX providers cannot input electronic medication orders into EPT-MMS for the nurse to execute during the patient's stay in the ED. As a result, there is not an electronic checks and balances present with several of the commercial civilian tracking system/electronic medical record software packages. Some of the data points within CHCS are outdated (i.e. triage classifications of non-urgent, urgent, emergent), and cannot be modified to reflect changes in national trends being used in many EDs today (e.g. five-tiered patient classifications). This limitation has the potential of skewing some of the data reported. For the laboratory, the expected turnaround time begins when a sample is received by the lab. The EPT-MMS system clock for laboratory orders starts when the test is

ordered. If there is a delay between ordering the lab test, collecting a sample, (e.g. difficult or combative patient), and the specimen being received by the laboratory, it will erroneously appear, that the testing has been delayed.

Preliminary informal evaluations have been promising. Members using the database during informal clinical trials indicated increased SA when managing overall ED patient flow, improved team communication integral to mitigate potential for medical error, and quicker accessibility to lab and radiological data when needed. Notably, the addition of screens in the laboratory was instrumental in assisting several PM and night-shift lab technicians with managing multiple lab equipment and specimen processing throughout all geographical areas of the laboratory. "The screens provide constant reminders of the tests ongoing in the department. This is helpful when you are only one of two lab techs on an evening

or night shift,” stated HM1 Daniel Manning. “More importantly, the lab screen alerts us as to when orders are placed. I can run quality controls and prepare equipment before receiving the blood specimen, thus expediting turnaround time,” said Manning. A formal evaluation of the lab turnaround time is scheduled for the fall.

EPT-MMS additionally enabled the administrative leadership of the organization to retrieve organized and relevant metrics that positively have allowed the system to leverage technology to affect significant gains in only 6 months. Administrators scrutinized several EPT-MMS productivity reports to address patient volume, peak presentation times and accessibility. Using data generated they shifted and added clinical personnel to times when maximum patient presentation occurred. This “staffing to metrics” contributed to an average decrease of 24 minutes in LOS per patient (16 percent reduction), since October 2004, despite an 11 percent increase in outpatient visits

and a steady admission and LWBS rate of 5 and 2 percent, respectively. The RVUs generated by ED providers have exceeded BUMED benchmarks for the first and second quarter FY '05.

Using reports to specifically address unscheduled returns or frequent ED visits of several beneficiaries, ED administration working in tandem with NHJAX and BMC case managers were able to analyze reasons for inappropriate ED utilization, alert primary care managers (PCMs) of the visits, help in assigning a PCM, or personally case manage the patient. The action has significantly reduced inappropriate utilization and the percent of patients triaged as non-urgent using the ED.

While EPT-MMS may assist ED personnel to decrease patient LOS and minimize the number of patients who LWBS, it is difficult to directly correlate reductions in these measurements to a quantifiable ROI. Decreasing LOS allows for greater ED capacity, thus potentially decreasing the number of

LWBS and AMA, hence decreasing risk management issues. Increased bed capacity may allow for the potential to care for more patients resulting in larger numbers of generated RVUs. Most importantly, decreased LOS is correlated with increased patient satisfaction.

The EPT-MMS initiative, strategically aligned with the National Patient Safety Goals, has positively impacted processes for beneficiaries utilizing NHJAX ED. The first generation application continues to be tested, evaluated, and modified to best manage the flow of patients and serve as the communication hub for patient information throughout the ED. NHJAX administration looks to market the initiative to other Navy MTFs in hopes of optimizing their systems and desired outcomes, specifically quality patient care, productivity, satisfaction, and improved situational awareness.

References

1. Burt, CW, Hing, E. Use of computerized clinical support systems in medical settings: United States, 2001-2003. *Advance Data from Vital Health and Statistics, Center for Disease Control*;15Mar2005;353.
2. Joint Commission of Accreditation of Healthcare Organizations. 2005 Comprehensive Accreditation Manual for Hospitals: The Official Handbook. Standard LD 3.15.
3. 2005 National Patient Safety Goals, Joint Commission of Accreditation of Healthcare Organizations. □

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Division Officer LCDR Marnie Buchanan, NC, analyzes daily metrics with previous data using the EPT-MMS reporting capabilities.

Ascertaining Ground Truth in Remote Sensing Malaria Threat Assessment by NAMRU-2 in Indonesia

LT Craig A. Stoops MSC, USNR

Once the command of the air is obtained by one of the contended armies, the war must become a conflict between a seeing host and one that is blind.—H. G. Wells

In 1943, Japanese control of much of Southeast Asia left few overland options to re-supply U.S. forces in Kunming, China.⁽¹⁾ Recapturing northern Burma from the Japanese and establishing that land route became a priority for LGEN Joseph Stillwell. He launched an operation to regain possession of the old Burma Road. While U.S. and Chinese troops advanced from Led in 1943 to the Namhkam Trail in 1945, scrub typhus, a disease transmitted by mites, emerged in U.S. troops and caused 695 recognized cases and 58 deaths. U.S. preventive medicine teams worked to control this disease and protect troops from exposure by conducting insecticide applications, treating uniforms, and educating troops on personal protection measures. One of the most important factors in controlling the disease was minimizing or eliminating contact between troops and the offending mite vectors. Medical teams used aerial photographs

in guiding bivouac placement to achieve that end, as well as to plan surveillance and control activities.⁽¹⁾

Diseases transmitted by insects have influenced the course of military operations since organized armies first took to the field of battle.⁽²⁾ These vector-borne diseases emerge when the triad of vector, pathogen, and nurturing environmental conditions intersect. Because of the need for these vector-borne agents to pass through at least one other animal, these diseases are intimately tied to the environment in which the animal lives. Knowing where the vectors are found in the environment is key to understanding how to mitigate risk of exposure to these agents. A large-scale or landscape level view of the environment, prior to a military mission, can give real-time information on potential vector habitats that can be incorporated into preventive medicine operational planning. In addition, dur-

ing military operations preventive medicine teams can use this information to guide control efforts and develop transmission-risk maps for vector-troop contact.

As was done in World War II, remote sensing, or the imaging of the Earth's surface from a distance, can be used to gather important information for medical planners. For the U.S. military, remote sensing is an important source of real time battle-space information or "actionable intelligence" to the war fighter. The U.S. military has access to the most highly advanced remote sensing platforms, from unmanned aerial drones to space-based platforms. In addition, there are several government owned unclassified satellites such as the Landsat 7 satellite, that provide data from seven distinct reflectance spectra and commercial satellites such as QuickBird, which can observe an object as small as 2 feet in size from 450 km above the Earth's surface. The combination of military satellites and open source satellites is a powerful tool that may be used prior to and during operations to guide force health protection measures.



Banda Aceh North Sumatra, Indonesia following the Tsunami. The standing water in the center was left by the receding water.

For over 60 years, Navy medical entomologists have protected Sailors and Marines from vector-borne diseases such as malaria, leishmaniasis, and dengue. Entomologists often do this by educating troops about vector-borne disease and how to protect themselves by using personal protective measures (e.g., repellents, bed nets, and permethrin-treated clothing). Other important functions of the medical entomologist include advising commands and commanders regarding risks of vector-borne diseases in specific geographic regions. Medical entomologists also render assistance on the ground during operations by conducting surveys of medically important insects and carrying out missions to control these hazards if necessary.

For the current forward deployed forces, remotely sensed information can be obtained not only from aerial photographs, but also by using space based platforms. Following an outbreak of *Plasmodium vivax* malaria in U.S. troops in the Republic of Korea, Navy medical entomologist CDR David Claborn used Ikonos and Landsat 7 satellite

images to identify vector habitat near the demilitarized zone.(3) Mosquito habitats were identified, and man hours of work and cost of control measures were determined using the images.

In addition to planning missions, this same information can be used retrospectively to understand why a vector borne disease did or did not cause morbidity or mortality in troops. A model based on remote sensing of *Phlebotomus papatasi* habitats examined cases of leishmaniasis and exposure of troops to vectors during the 1991 Gulf War.(4) Using information known about *P. papatasi* life history, the predicted peak of sand fly activity would have been during the spring/summer months. The low number of cases of leishmaniasis were explained by low vector troop contact because the bulk of the troops were in sand fly areas following the peak period of sand fly activity. Predictions forecast that more cases of leishmaniasis had the troops been present during the spring and summer. Leishmaniasis cases peaking in September during Operations Iraqi Freedom and Enduring Freedom affirmed that prediction.(5)

This technology is not without difficulties. One is accurately correlating the image with what is found in the field. The images, properly interpreted in the context of ground truth verification, may reveal precisely where vector breeding sites are located. The

photo upper left, taken on 14 January 2005 by CAPT Kevin Baird U.S. NAMRU-2, shows the destruction wrought by the 26 December 2004 Tsunami in what had once been a downtown area of Banda Aceh, a city of nearly half a million people. The image illustrates the vastness of the debris field and, in the foreground, its potential for harboring pools of standing water. The distribution of such pools, which represented potential breeding sites for the vectors of malaria, became a critical public health concern. In fact, the most efficient and therefore dangerous vector of malaria in western Indonesia is *Anopheles sundaicus*, and it happens to thrive in the kind of brackish water left behind by the tsunami. The anxiety level on such pools was thus very high indeed. The photo below is a QuickBird satellite image of the section of Banda Aceh where the upper image was taken. Thus correlating ground truth with what appears in remotely sensed images provides the key to gauging public health risks like the one shown, which was seen to be extremely widespread. Ground truthing is done by going into the field, finding a site where a species of interest is present, marking that site using



A QuickBird satellite shot of the northern shore of Banda Aceh displays an overhead view of the picture above.

a global positioning system and recording the physical features of the habitat. To use this technology to its fullest potential, ground truthed data on vector habitats and distribution must be collected to predict accurately species presence in current or future areas of operations.

Remote Sensing and Malaria Vectors at NAMRU-2

At U.S. Naval Medical Research Unit 2 (NAMRU-2) in Jakarta, Indonesia the Medical Entomology Department conducts studies of the spatial distribution of mosquitoes in the genus *Anopheles*, vectors of malaria. The Military Infectious Disease Research Program funds this work to meet task objectives of understanding the ecology of malaria transmission. Malaria has been and remains the most serious infectious disease threat to military operations worldwide.(6) A recent example was the 2003 deployment of 160 Marines from the 2nd Marine Division as a quick reaction force to Sierra Leone. Because of poor malaria chemoprophylaxis compliance, 44 Marines developed malaria after 10 days ashore from the USS *Carter Hall* (LSD 50).(7) That translates to an attack rate of 83 percent per month, or five infections for everyone during a 6-month deployment. Another way to translate those numbers is almost certain mission aborting potential without protective measures.

Stable, endemic malaria transmission occurs through most of the Indonesian archipelago, and very high transmission occurs on the easternmost islands like the Moluccas and New Guinea. However, the heavy malaria transmission that once occurred on Java and Bali was nearly eradicated during

the days of DDT spraying in the 1950s and 1960s. In the Sukabumi District of West Java, the rate of *Plasmodium falciparum* and *P. vivax* malaria has increased since 1998. Only one malaria case was reported in this area in 1998, yet by 2003, that number had increased to 1,790 cases (Indonesian Ministry of Health unpublished data). In 2003, there were 17 deaths attributed to *P. falciparum* in the Sukabumi Subdistrict of Simpenan, where the Annual Parasite Incidence (API) is now as high as 134/1000 people/year in some areas.

In collaboration with the Indonesian Ministry of Health and the U.S. National Aeronautics and Space Administration (NASA), NAMRU-2 is investigating what *Anopheles* species were present in the area of the Sukabumi outbreak, and if there were any environmental variables linked to presence of the species incriminated as the responsible agent of transmission. The island of Java has a surface area of 126,566 km² (approximately the size of the State of New York), and in 1995 it had a population of 115 million people, or an average of 909 inhabitants per square km.(8) We focused on the site where malaria had broken out, in Sukabumi on the southern coast of the western end of Java. Characteristic of most of West Java, the district had a mix of human inhabitants, rice paddies, home gardens, tea and rubber plantations, and forest.

These typical tropical habitats can be identified on the QuickBird images as one would use an aerial photograph, but with species presence correlated with ground-truthed field collected habitat data, analyses using Geographical Information Software (GIS) can be done

to predict species presence over a large area. For example, rice fields can be identified on these images, but by having the exact coordinates of a rice cultivation area, one can be certain what the image or a computer generated groundcover classification map reveals are rice fields rather than fish cultivation ponds or other landscape features involving standing water. Field collected data and the digital groundcover classification maps are overlaid using GIS software and analyzed using spatial statistics. It is this analysis that is used to determine if species presence is associated with a landscape feature. For example, the species *An. aconitus* have historically been shown to be an important vector of malaria in Indonesia.(9) By showing a statistically significant relationship between species presence and rice fields, the estimated area under rice cultivation can be calculated and the risk of contact with this species can be determined even in unreachable areas. This method has proven successful in other tropical regions. For example, Roberts et al (1996) accurately predicted the presence of *An. pseudopunctipennis* in Belize using remote sensing in an area where this species was not known to occur.(10)

Environmental characteristics are complex even in rice fields. Studies at NAMRU-2 try to identify what species occur in rice fields, but if there are differences in the growth stage of rice plants and associated mosquito species presence and, finally, to see if this can be identified from the satellite images. In effect, this study generates ground-truthed data for the species that are collected for use in interpreting images such as the Landsat 7 TM satellite image. For example, is it that pre

harvest rice fields are hospitable to mosquito breeding, or is it flooded post harvest fields? If known, rice fields of specific development may be assessed for risk, instead of all rice fields.

The NAMRU-2 study has identified and ecologically characterized more than 1,000 sites and identified 15 species of Anopheles, including important vector species such as *An. aconitus*, *An. maculatus* and *An. sundiacus*. Images from Landsat 7 indicate strong zonation in vegetation related to distance from the coast, elevation and vertical incline of hillsides. Images from QuickBird are currently being collected and will be used to test if ecological conditions on the ground can be matched with species presence. The findings confirm that the distribution of mosquitoes that transmit malaria follow a distribution of conditions that favor their proliferation, and remote sensing may be capable of detecting those patterns.

Conclusions

The utility of remote sensing in the prediction of disease vector species presence and abundance is well established.(11) Studies have been conducted on Lyme Disease and ticks, Rift Valley Fever and mosquitoes, African Sleeping Sickness and tsetse flies, and Hantavirus and deer mice.(12-15) Remote sensing guides mosquito control even in urban environments.(16) Integration of remotely sensed terrain and cover data into specific measures to protect troops deployed to specific areas against specific infectious threats constitutes the operational challenge of this technology platform. Remote sensing technology improves every year, but the ap-

propriate interpretation of raw data and translating it into "actionable intelligence" nonetheless requires special skill sets. These include understanding infectious diseases, their vectors, the ecology of disease vectors, and the technology of remote sensing. The skill sets should also include ability to foster inter-agency cooperation with the U.S. Government in order to maximize the efficiency of use of resources. Bringing the fruit of such efforts--real-time estimates of infectious disease threats at specific times and places--to combatant commands would substantially improve their ability to protect the men and women of the U.S. Armed Forces.

References

1. Philip CB. Scrub typhus and scrub itch. Pp 275-357 In Preventive Medicine in World War II. Office of the Surgeon General, Department of the Army, Washington DC. 1964:275-397.
2. Zinsser H. *Rats, Lice and History*. Little Brown and Co. Inc. Boston, MA. 1934. 313 pages.
3. Claborn DM, Masuoka PM, Klein TA, Hooper T, Lee A, Andre RG. A cost comparison of two malaria control methods in Kyunggi province, Republic of Korea, using remote sensing and geographic information systems. *Am J Trop Med Hyg*. 2002;66:680-685.
4. Cross EW, Newcomb W, Tucker CJ. Use of weather data and remote sensing to predict the geographic and seasonal distribution of *Phlebotomus papatasi* in Southwest Asia. *Am J Trop Med Hyg*. 1996;54:530-536.
5. Anonymous. Cutaneous Leishmaniasis in U. S. Military Personnel -- Southwest/Central Asia, 2002--2003. *Morb Mortal Wkly Rep*. 2003;52:1009-1012.
6. Beadle C, Hoffman SL. History of malaria in United States Naval Forces at war: World War I through the Vietnam conflict. *Clin Infect Dis*. 1993;16:320-329.
7. Clagett CD. Malaria among 26 MEU personnel Liberia, Aug-Sep 2003. Navy Environmental Health Center, Norfolk, VA 2003. Unpublished document. 12 pp.
8. Whitten T, Soeriaatmadja RE, Afiff SA. The ecology of Java and Bali. The ecology of Indonesia series Vol. II. Periplus Editions Ltd. Singapore. 1996. 969 pages.
9. Takken W, Snellen WB, Verhave JP, Knols BGJ, Atmosoedjono S. Environmental measures for malaria control in Indonesia: an historical review on species sanitation. Wageningen Agricultural University Papers 1991 90.7, Agricultural University Wageningen, the Netherlands.
10. Roberts DR, Paris JF, Manguin S, Harbach RE, Woodruff R, Rejmankova E, Polanco J, Wulschleger B, Legters LJ. Predictions of malaria vector distributions in Belize based on multispectral satellite data. *Am J Trop Med Hyg*. 1996;54:304-308.
11. Washino RK, Wood BL. Application of remote sensing to arthropod vector surveillance and control. *Am J Trop Med Hyg*. 1994;50:134-144.
12. Estrada-Pena A. Geostatistics and Remote sensing as predictive tools of tick distribution: a Cokriging system to estimate *Ixodes scapularis* (Acari: Ixodidae) habitat suitability in the United States and Canada from Advanced Very High Resolution Radiometer satellite imagery. *J Med Entomol*. 1998; 35: 989-995. □

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NSHS Portsmouth Has a New “IDEA” for Staff Development

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Since January 2005, “extreme makeovers” have been occurring with marked frequency and yielding extraordinary results at the Naval School of Health Sciences (NSHS), Portsmouth. The “extreme makeover” has been applied to the new instructor in-service program called the Instructor Development and Enrichment Academy or **IDEA**.

The goal of IDEA is to provide additional training for new instructors and refresher training for veteran or “encore” instructors returning to the education and training arena. The program equips them with the necessary tools to perform their duties efficiently and effectively. This staff development supplements, but does not replace, the training provided through Instructor Training School or comparable formal training.

Since 1996, a staff development program has been offered to personnel in instructor billets at NSHS Portsmouth. The program has undergone several evolutions, all aiming to improve the efficiency and scope of information delivered. Personnel qualified as Master Training Specialists and Instructional Systems Specialist (ISS) created the program. Most times, staff development was relegated to personnel having received the 9502 Naval Enlisted Classification (NEC) of Instructor.

The training is mandatory for instructors, but is offered to all staff personnel interested in instructing and curriculum process development. Instructors will be able to participate effectively in all phases of curriculum planning and development. The IDEA currently offers 33 courses annually. The course offerings are captured under three major headings: Instructional Skills, Administration, and Curriculum Planning and Development. Two modes of delivery are employed--computer based

training and group paced instruction by an ISS or other subject matter expert. This training program provides instructors the opportunity to participate in all development training, while maintaining their ever-changing class schedules.

Additionally, the staff development net is being cast wide and going beyond instructors. The aim of staff development is to also provide training to personnel holding other titles and levels of responsibility within the NSHS Portsmouth Academic Directorate. The titles and levels of responsibility include curriculum managers, school heads, department heads, and program managers.

The overarching goal of staff development is to provide baseline training that equips all personnel with requisite knowledge to perform their duties efficiently (e.g., doing things right) and effectively (e.g., doing the right things). Previously, staff development topics offered were few and they covered only basic knowledge and rudimentary skills. For example, an instructor could improve his or her ability to deliver instructor-guided and instructor-dominated lectures. Further, an instructor could hone the skill of producing transparencies.

The program was developed in this particular format to eliminate three variables that contributed to poor attendance in staff development training. One variable was identifying the subject-matter source, as this was typically always a challenge. Another variable was being restricted to one or two instructional delivery methods. The third variable, and often the most elusive, was scheduling and delivering training at times and in locations that were most accommodating for the greatest number of instructors.

Opportunities for product and process improvements surfaced. These opportunities were the catalysts and urgings that incited an "extreme makeover." The result is a rejuvenated, refurbished, and renovated staff development program, or the "**BIG IDEA**." After the development of this program, the number of topics offered through the program was increased from three to 33. The topics are grouped under three major units: Instructional Skills, Administration, and Curriculum Planning and Development.

A few lesson topics presented under the banner of the Instructional Skills Unit are "*Mentoring the New Instructor and Peer Evaluation Review Board Preparation*," "*Oral Questioning Techniques*," "*Use of Instructional Media Materials*," and "*Instructional Delivery Methods*." The Administration Unit contains lesson topics that includes titles such as "*The Student Evaluation Plan*," "*Test Failure and Remediation*," "*Test Item Analysis*," "*Developing Lesson Topic Guides*," and "*Proctoring Examinations*." Comparatively, the scope of the Curriculum Planning and Development Unit includes such lesson topics as "*Writing Learning Objectives*," "*Writing Technically Adequate Test Items*," "*The Cyclical Curriculum Review Process*," and "*After Instruction Reports*."

Two distinct modes are used for delivering instruction. Lesson topics are assigned to the method for which it is best suited. One forum used is in a traditional classroom setting, group-pace style. The subject-matter expert uses an array of instructional methods (i.e., lecture, demonstration, discussion, role-play, etc.).

Five lesson topics were identified as being potentially better suited for delivery in the traditional classroom setting. They are "*Test Item Writing Skills*," "*Developing Lesson Topic Guide*," "*Writing Learning Objective*," "*Test Failure & Remediation*," and "*Test Item Writing Skills*." The indicator for selecting the lesson topic to be delivered in this setting and fashion were (1) scope and complexity of the content, (2) effectiveness of the appending demonstration of techniques, (3) the need for immediate practical application, and (4) the ability to deliver immediate feedback to the trainee.

The traditional classroom setting, group-pace style has undeniable advantages. The staff members can interact with the instructor in a real time manner--seeing demonstrations, asking questions, receiving feedback, and taking away a product for future use.

Conversely, comparable restrictions are attached to the traditional classroom setting, group-pace style. Among the restrictions is providing staff development

instruction at the time and with the frequencies that meld well with the staff's daily schedule of activities. The other mode of instruction delivery is technology-based, self-pace style. The lesson topic is delivered through computer-based and computer-assisted means. The use of available technology is a solution to the restrictions imposed by the traditional classroom, group-pace style.

Lesson topics are presented cyclically and related lesson topics are presented in tandem. For 10 days, the lesson topics are "open." An instructor may choose the time—virtually 24 hours per day when to attend the IDEA.

Delivering instruction on-demand at the times and locations suitable to the instructor is one of the advantages of computer-based and computer-assisted instruction. Levels of instructor comprehension are measured electronically upon completion of the lesson topic. Before exiting the lesson topic, the instructor takes an examination and feedback is provided immediately.

For example, if the response to a question is correct, the response is reinforced and rewarded. Conversely, if an incorrect response is rendered, additional just-in-time instruction is delivered. A question that is answered incorrectly is then asked again three different ways.

A record of the instructor's performance is maintained electronically. When the when the lesson topic is completed, the instructor is provided a "training receipt." Ensuring that the instructor is equipped with basic skill sets has wide-ranging ramifications. First, the probability that the instructor will be successful is increased. Second, the instructor will be able to participate in all phases of curriculum development, various aspects of student training and perform associated administrative duties.

Staff development makes certain every instructor possesses knowledge, skills, and abilities to perform instructional responsibilities. Yet, the growth and professional acumen of a staff member is largely a matter of self-development, continuous improvement, and professional enrichment under the control of the individual staff member.□

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Rocket Surgery

“Doctor, there’s a young kid up in Triage and he’s got something sticking out of his knee.”

I asked how big it was. And he said, “It’s about 3 inches in diameter, and it’s long.”

I pulled on my boots, and the corpsman and I walked up to Triage to see what the object was. It was obvious to me what it was—a 2.75mm rocket, probably from a Huey helicopter. I had seen those pods with multiple holes on the sides of Hueys and this type of rocket fit in one of those holes.

The whole damn rocket had gone right through the kid’s patella and his leg was flexed at the knee. I leaned over and asked him, “Were you being supported by helicopters?”

He said, “Yeah.”

“Were they firing rockets?” And he nodded.

I turned and whispered to the corpsman to get everyone out of there and then said, “I think this is a live rocket.”

I had an EOD [Explosive Ordnance Disposal] man standing by—a Marine. He motioned to me and I went over to him. “Doctor, if I were you, I’d be most careful with that thing.”

I asked him if I should take any special precautions and he suggested that I not be too rough with it.

The Vietnam War generated the kinds of injuries expected in a mid-20th century conflict fought with high velocity small arms, mortars, rockets, artillery, and the most insidious weapon of all—land mines. As the war ground on, medical personnel became proficient in treating hideous wounds inflicted by these instruments of war. Yet surgeons were also forced to confront the unimaginable—fighting men who had survived violent encounters with ordnance that had inexplicably failed to detonate. What to do with an unexploded mortar shell embedded in a Soldier’s chest wall or an armed rocket protruding from a patient’s knee? These were situations that required caution, skill, and courage. This is the story of a heroic surgeon who went above and beyond his normal medical routine to save a life.

As Navy surgeon David Taft recalls, he was lying in his rack at Charlie Med reading a book that fateful afternoon in August 1967 when a corpsman disturbed his rest.

He then said, “There’s no reason for me to be in here too.”

I told him I wouldn’t let him stay anyway. “If you want to see surgery sometime, I’d be happy to take you into the OR, but right now I don’t want anybody else getting hurt.”

Pretty soon the whole place was empty except for the patient and me. He said, “What’s up?” and I told him that we would have to take him to the operating room to remove the rocket. I left him and went out to try to find some help but most everybody had disappeared. I asked a first class corpsman about anesthesia, and he said that nobody wanted anything to do with this situation.

I knew how to give a spinal so I requested that he get a tray ready for me. I then asked for a corpsman to help me, just to pass things. Was there anybody there who could do that?

A corpsman named [HM1 Daniel B.] Henry said he would help me. So he and I took the young patient

back to the OR. I had already done the spinal and given him heavy sedation. By this time, we were wearing flak jackets. I said, “This is ridiculous. Are you going to put a flak jacket over my head, too? If this thing goes off, it will blow the hell out of both of us.”

I examined the x-ray and it looked to me like the rocket had destroyed his knee. In fact, on the x-ray the knee looked like a handful of dice. The rocket was just jammed in there. Henry said that one of the orthopedic surgeons had suggested that I just cut the leg off because all the vessels and nerves were destroyed.

We applied some Zephiran [topical antiseptic] to the knee and I began working. Initially, I tried to rock the thing but the rocket was stuck. The knee is an interesting structure. It’s under tension. If you stick something in between the tibia and the end of the femur, it’s stuck there! I could have cut into the joint and removed it, but by that time the foot

was really looking bad. It had been a couple of hours with the knee so badly smashed. It was better surgery to just remove the leg.

The lad was already asleep so I proceeded, cutting through soft tissue about three inches above the knee. Of course, I knew what could happen but there was no other option. I remember thinking, "If I get out of this one, I'm sure going to be a good boy from now on." The part that made me nervous was putting the saw to the femur. Originally, I had asked for a Gigli saw—a flexible wire saw. It has a handle on either end and you pull it back and forth. When I got down to the bone I said, "I don't want to put a saw on that thing." So I made a tunnel behind the femur and threaded the flexible blade through. Then I told Henry to hold onto it as tight as he could but it wasn't working very well. I pulled it out and went back to the old standard Civil War-era rigid saw. I knew somebody else would have to revise this amputation because, under the circumstances, I couldn't create good skin flaps. So I held the leg with one hand and sawed with the other. I finished cutting through the remaining soft tissue and clamped off bleeders.

Then I took the leg and carried it outside. I looked around and noticed that there wasn't a soul to be seen. Ordinarily the place was a beehive of activity. Way out in the field, I spotted a Marine lieutenant, one of our security people. He said, "Hey, Dave, bring it over here. There's a big hole. Put it in the hole."

I very carefully carried the leg with the rocket sticking out of it and very gently placed it in the one-foot-deep hole. Someone had

already placed C-4 [explosive] in the bottom. As I turned to head back to the operating room to dress the wound and clean things up, the lieutenant was waiting for me up ahead. "Dave," he said, "That really took balls."

I said, "I figured if the rocket hit the guy that hard and didn't go off, I probably wasn't going to set it off fooling around with it."

He said, "That's not necessarily the case. Generally, if they haven't gone far enough, they don't explode. It has to go beyond a certain distance for it to be armed."

"I'm glad I didn't know that," I answered.

He patted me on the back and said that when I finished up in the OR, he'd buy me a drink. I accepted his offer.

When I went back into the OR, Henry and the patient were talking.* While we were cleaning up the wound, suddenly we heard a huge explosion and things began falling on the roof of the Quonset hut we were in. The patient looked up and said, "Are we getting hit?"

I said, "No. There's a gravel pit across the way and they always set off a charge about this time in the afternoon. That's what it was. Go back to sleep."

Even now, it's not clear in my mind whether they set off the explosion that destroyed the rocket, or if it went off spontaneously.

That afternoon and evening I went back to see the patient to make sure he was okay. He asked me what I had done with him and I had to tell him that it required an amputation.

I said, "Son, your leg was amputated above the knee. But it should not be a problem. They will fix you up with a prosthesis and everything will be okay."

"Sir, I've got a basketball scholarship waiting for me."

"Well, I don't think you'll play basketball for a while." I asked him where the scholarship was from, and he told me it was one of the up-state New York universities. I asked him for the address. I would write a letter explaining what happened, which I did. And they gave him the scholarship anyway!

The patient's name was Ray Hutton. He went home and I saw him again at Walter Reed [Army Medical Center] when I got home.

The ward reminded me of Walt Whitman and the Civil War hospitals he worked in as a nurse. There were 15 or 20 beds per side and patients with all kinds of amputations—arms, legs, or both. And there was Ray Hutton. I went over and gave him a big hug and asked how he was doing. We had a good talk and down through the years I got letters from him. I was at Camp Pendleton in the '90s when my wife gave me a letter and said, "Ray Hutton's written you a letter."

I looked at the envelope and realized it wasn't from Ray; it wasn't his writing. The letter was from his son and I didn't want to open it. It seems that his father had suffered a coronary and died. Ray's son wrote: "You gave him a lot of great years and we'll never forget what you did."—JKH□

*Shortly after this incident, HM1 Daniel Henry was killed in a mortar attack.

A Navy Surgeon on Olympus

Notes on the Life and Times of Dr. William P.C. Barton

March 3rd 1856. A parade of America's most prominent healers and teachers have gathered at that Victorian statue garden Laurel Hill to pay respects to one of their own.* Dr. William P.C. Barton may have been many things in his exceptional life—medical botanist, physician, professor, naval surgeon, and, perhaps, upstart—but today, like his forebearer Aesculapius, his legacy has been left to the stars.

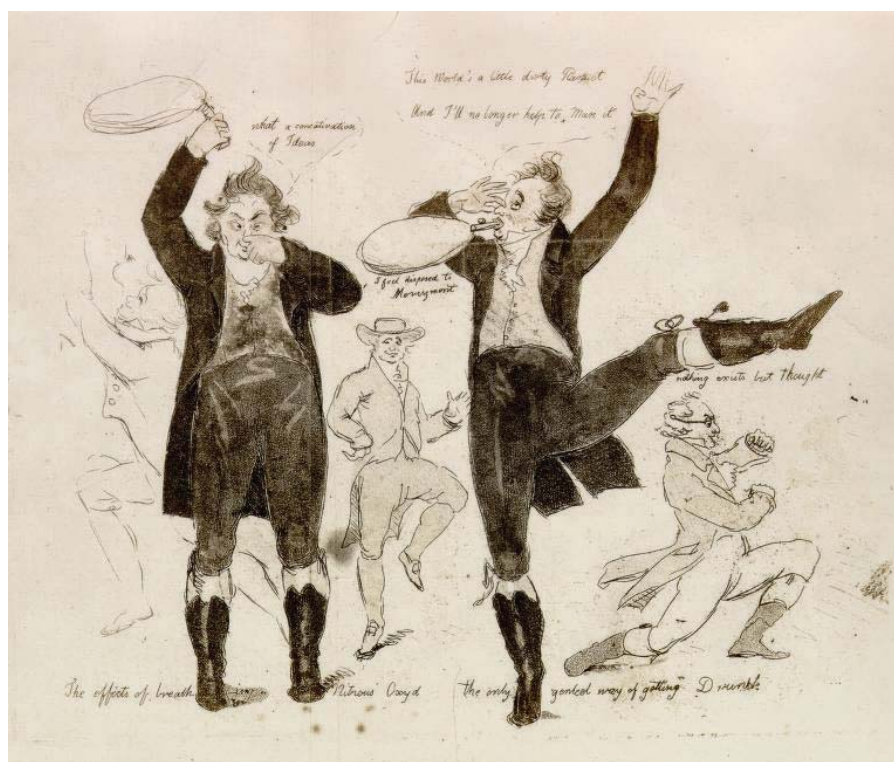
William P.C. Barton's trek to this immortality began on 17 November 1786 in Philadelphia, PA. He was a "noble savage" by birth, a product of a distinguished lineage.** His father William Barton (1748-1831), a lawyer, was the designer of our nation's Seal. His uncle, Benjamin Smith Barton (1766-1815), was America's pre-eminent medical botanist and vice-president of the famed American Philosophical Society. And, considering that young Barton grew up around family friends Drs. Benjamin Rush, Caspar Wistar, George Reed, and Thomas C. Jones, could there be any doubt that he, too, would be lured by that muse of science?

In Barton's day, Philadelphia was a city hallmarked by its famed doctors and prestigious medical institutions, much like Mt. Olympus was known for its gods and divine intrigues. In 1752, the first hospital in the United States was founded in Philadelphia.*** The first (American) medical textbook was published in Philadelphia; not far from where the first clinical medical lecture was delivered by the Philadelphian Dr. Thomas Bond, the Byberry born Dr. Rush penned some of the first writings on the new discipline of psychiatry.**** And let's not forget that Navy surgeon, and Philadelphian, Edward Cutbush wrote the first (American) book on military medicine from his medical practice in this City of Brotherly Love. His *Observations on the Means of Preserving the Health of Soldiers and Sailors* spawned much needed reforms in both the Navy and Army.(1) Undoubtedly, between Cutbush, Rush, and later Barton, Philadelphia doctors clearly had things to say.

As was the custom for gentleman of "polite society," William

P.C. Barton pursued a formidable "classical education," at Princeton University. The curricula included Aristotelian logic, the study of the Greek and Latin languages. His initial's P.C. can be dated from his Princeton days when it was fashionable to assume the name of a celebrated character, as if summoning a spiritual guardian for a life's journey. Barton chose the very P.C. "Paul Crillon," after the French military hero.

Barton began studying medicine under his uncle Benjamin Smith Barton at the University of Pennsylvania in 1805. In these years of study, William Barton's interest in botany and the natural sciences bloomed into a passion. Dr. B.S. Barton was America's most famous botanist and author of the first American textbook on this science of plants. According to one source, Dr. B.S. Barton's talent of capturing plant life in pen and pencil is traced to his tutelage under the multi-talented, British martyr MAJ John André when both were in Lancaster, PA.(2) Whether this story is true, it cannot be denied that W.P.C Barton



Sketch that appeared in Surgeon Barton's *Dissertation on Nitrous Oxide*. There is more than a passing resemblance between the young Barton and the "drunken" man in the picture.

inherited these talents of sketching and knowledge of materia medica in great quantities.

Years later, a student of Barton stated that Dr. Barton was happiest while on botanical excursions around the Schuylkill River, at Bartram's gardens, or in some open field in search of specimens. "He experienced as great delight in the discovery of a new plant as Audubon did at the sight of an undescribed bird, or John Hunter in the dissection of a strange animal. He was, in fact, a botanical enthusiast."⁽³⁾ Today his numerous illustrated books on botany are much sought after by collectors.

In 1808, upon publication of *A Dissertation on Chymical Properties and Exhilarating Effects of Nitrous Oxide Gas and Its Application to Pneumatick Medicine*, Barton received his medical degree from the University of Pennsyl-

vania. Complete with an illustration of a giddy man breathing in "laughing gas" from a sheep's bladder. The treatise had great impact on scientific thought when nitrous oxide experiments were "generally derided as extravagant and imaginary."⁽⁴⁾

At the age of 23, Dr. Barton was approaching the zenith of professional acclaim. Being of suitable means and blessed with an acceptable name, he could have done anything. He chose to enter the U.S. Navy in that "gentlemanly and honorable profession" of a surgeon. He received his commission 10 April 1809, and less than a week later commissioned the famous Thomas Sully to paint his portrait for a sum of \$50. This picture, now in the Wilstach Collection at the Philadelphia Museum of Art, shows a young Barton in uniform—a blue coat with gold braid, his hands

gloved, and his right arm resting on a divan.⁽⁵⁾ He looks wise and almost mischievous, part Loki and part Mr. Darcy.*****

Who knows what impressions his commanding officer CAPT Stephen Decatur, Jr., may have had of him when he reported on board the *United States* as ship surgeon in the summer of 1809. Fevers and fluxes were rife aboard the frigate. With a daily sick list of 40 men, Dr. Barton did not have enough provisions for his patients and there was no way around persevering on whatever wine, brandy, chocolate, sugar, sheets, pillows, and nightcaps they had.⁽⁶⁾ Barton would write, "I was overwhelmed with the difficulties I had to encounter in the performance of professional duties, where every species of inconvenience and disadvantage that can be imagined was opposed to the exertions of the surgeon."⁽⁷⁾ Ultimately, Barton

was not one to accept inadequacies, but rather to fight for reform.

Surgeon Barton fought to abolish the “loose and irregular” manner in which ship medical supplies were replenished. He called for the introduction of lemon and limes aboard Navy ships years before the U.S. Navy accepted the importance of an antiscorbutic treatment for the dreaded vitamin C deficiency, scurvy. Surgeon Barton went as far as to send a bottle of lime juice to the Secretary of the Navy Paul Hamilton with the instructions to drink it in the form of lemonade.(8) His bold and not always “PC” manner would anger many of his colleagues who thought he was overly indulged and adept at seeming to wriggle out of assignments. Dr. Barton was all too aware of the critics and once reminded one of them that he was a professional man and joined the U.S. Navy voluntarily.(9)

Throughout his career, Dr. Barton became very familiar with the administration of hospitals. In 1830 he became the commanding officer at Naval Hospital Norfolk, VA, only the second to hold that position. He was involved in the development of the Philadelphia Naval Hospital when it was located in the Naval Asylum. Today, this important structure, that also served as the first home of the U.S. Naval Academy, stands as a sort of gothic playground in Grays Ferry. Its walls stand despite years of neglect, as one of the few W.P.C Barton landmarks.

His *A Treatise Containing a Plan for the Internal Organization and Government of Marine Hospitals in the United States: Together with A Scheme for Amending and Systematizing the Medical Department of the United States Navy* (1814) con-

tained recommendation of reform for the already new Navy hospital system. He urged that Navy hospitals should be modeled after British medical facilities; in essence, they should be cleaner and more orderly than their American counterparts. Among his many recommendations included that all hospital articles should be marked “U.S. Naval Hospital” to prevent theft.(10)

Much of Dr. Barton’s zeal was dedicated to his years of teaching *Materia Medica*, or medical botany, at the University of Pennsylvania

and Thomas Jefferson Medical College. One of his prominent students was Dr. Samuel D. Gross, later immortalized in the Thomas Eakins painting *The Gross Clinic* (1876). Gross portrayed his old teacher as a colorful character in a speech delivered to the Alumni Association of Thomas Jefferson Medical College on 11 March 1871.

He was, in all respects, a remarkable man: highly educated, learned in his profession, a graceful lecturer, and able writer and one of the most accomplished



Portrait of Dr. Barton by Thomas Sully (1809). It should be noted that Barton is wearing the first official uniform for a Navy surgeon.

Courtesy of the Philadelphia Museum of Art

botanists in America. He abounded in flashes and wit, and a vein of irony and sarcasm was perceptible in almost everything he did and said. He had a passionate love of music and played with consummate ability upon the flute and violin. Many of his acts were marked with eccentricities of genius. His style of lecturing was conversational, plain, simple and didactic, with out any attempt at oratory, and his success as a teacher was all that could be desired. In his appearance he was a model of neatness and elegance. He seldom wore the same coat, vest, or cravat on two successive days. In his criticisms of contemporaneous writers he was often severe and even bitter, especially when he had occasion to speak of a certain writer on *Materia Medica*, with whom he had long been on terms of open hostility. He would then, often with a peculiarly disdainful curl of the upper lip, fly off into the keenest satire and invective, much to the amusement of his young auditors, all of whom, with a few exceptions, were warmly attached to him. It was his invariable practice, too much neglected in most of our schools, every morning to ask the class some questions respecting the lecture of the previous day. (11)

As a Navy surgeon, Dr. Barton succeeded to the highest post available, despite opposition in the Navy community. Surely, President John Tyler saw Barton as a capable leader with integrity when he appointed him the first head of the Bureau of Medicine and Surgery on 2 September 1842. It should be made clear that Dr. Barton served as the Chief of BUMED. It was only in March 1871 that the post of Navy Surgeon General was created. Ironically, Dr. Barton once argued

against the creation of the post of Surgeon General in his *A Polemical Remonstrance Against the Project of Creating the New Office of Surgeon General in the Navy of the United States* (1838).

His time as Chief clerk was active, but short for this accomplished man. Among his recommendations was the adoption of a supply table so that drugs and medical supplies could be properly procured and accounted for; the abolition of a venereal fee; uniform standards for recruits; higher professional standards for Navy physicians; standardization and administrations of naval hospitals; and strict control over the use of liquor on board ships.*****

He was very principled and a vehement prohibitionist. He had a “liquor circular” pasted on boxes of whisky identifying the contents as medical supplies which required a stringent accounting. This was not popular among the fleet. One line officer went as far as to charge Barton with “official misconduct.” However, the charge was thrown out of court for “not being valid.” (12)

Some philosophers have called a person’s life nothing more than series of layers that could be described as either “cyclical” or “linear.” Cyclical is the repetition of action—for example walking (left, right, left, right); it is the immersion in routine. Linear can be seen in the stream of consciousness, thought and reflection; it is highlighted by development. Because of these layers, man is said to be both the “animal of repetition” and the “divine animal of thought.” Surgeon William P.C. Barton also had a saying, which is a testament to what layer suited him best. “Labour

is arduous, but it is not the toil of Sisyphus.” (13) May Dr. W.P.C. Barton’s “linear life” be the model for each of us.

*Laurel Hill Cemetery, founded in 1836, also contains the grave of Navy Surgeon Elisha Kent Kane (1820-1857).

**French social philosopher Jean-Jacques Rousseau (1712-1778) believed all humans were born as “noble savages” with certain innate abilities.

***The Almshouse of Philadelphia can be dated back to 1732.

****Byberry Township is in the northeastern part of Philadelphia.

*****Loki is the Norse god of mischief. Mr. Darcy is the eligible bachelor from Jane Austen’s *Pride and Prejudice*.

*****Sailors in Barton’s day had to pay a fee for treatment of their venereal disease since it was considered non-work related.

References

1. Pleadwell, FL CAPT. Edward Cutbush, M.D. The nestor of the medical corps of the Navy. *Annals of Medical History* 5. 1923. p 367.
2. Croskey, JW. *History of Blockley: A History of the Philadelphia General Hospital from its Inception, 1731-1928*. Philadelphia, PA. F.A. Davis Company: page 180
3. Gross, Samuel D. A speech to the Alumni Association at Thomas Jefferson Medical College, 11 March 1871.
4. Barton, WPC. *A Dissertation on Chymical Properties and Exhilarating Effects of Nitrous Oxide Gas and Its Application to Pneumatick Medicine*. Philadelphia, PA. Lorenzo Pres. 1808. pp. xiii-v.
5. Philadelphia Museum of Art. William P.C. Barton, W1919-2-1. Fact Sheet.
6. Langley, HD. *A History of Medicine in the Early U.S. Navy*. Baltimore, MD. Johns Hopkins Press. 1995. p 209.
7. Barton, WPC. *A Treatise Containing a Plan for the Internal Organization and Government of Marine*

Hospitals in the United States: Together with A Scheme for Amending and Systematizing the Medical Department of the United States Navy. 1st ed. Philadelphia, PA. Privately printed. 1814. p xiii.

8. Ibid., pp 147-155.

9. Langley, HD. *A History of Medicine in the Early U.S. Navy.* Baltimore, MD. Johns Hopkins Press. 1995. p 153.

10. Barton, WPC. *A Treatise Containing a Plan for the Internal Organization and Government of Marine Hospitals in the United States: Together with A Scheme for Amending and Systematizing the Medical Department of the United States Navy.* 1st ed. Philadelphia, PA. Privately printed. 1814. pp 38-39.

11. Gross, SD. A speech to the Alumni Association at Thomas Jefferson Medical College, 11 March 1871.

12. Pleadwell, FL CAPT. William Paul Crillon Barton (1786-1856), surgeon, United States Navy: a pioneer in american naval medicine. *Mil Surg.* 1920;46:241-281.

13. Barton, WPC. *A Treatise Containing a Plan for the Internal Organization and Government of Marine Hospitals in the United States: Together with A Scheme for Amending and Systematizing the Medical Department of the United States Navy.* 1st ed. Philadelphia, PA. Privately printed. 1814. p xv.

Bibliography

Barton, WPC. *A Dissertation on Chymical Properties and Exhilarating Effects of Nitrous Oxide Gas and Its Application to Pneumatick Medicine.* Philadelphia, PA. Lorenzo Press. 1808.

Barton, WPC. *A Treatise Containing a Plan for the Internal Organization and Government of Marine Hospitals in the United States: Together with A Scheme for Amending and Systematizing the Medical Department of the United States Navy.* 1st ed. Philadelphia, PA. Privately printed. 1814.

Croskey, JW. *History of Blockley: A History of the Philadelphia General Hospital from its Inception, 1731-1928.*

Philadelphia, PA. F.A. Davis Company: page 180

Gross, Samuel D. A speech to the Alumni Association at Thomas Jefferson Medical College, 11 March 1871.

Langley, HD. *A History of Medicine in the Early U.S. Navy.* Baltimore, MD. Johns Hopkins Press. 1995.

Philadelphia Museum of Art. William P.C. Barton, W1919-2-1. Fact Sheet.

Pleadwell, FL CAPT. William Paul Crillon Barton (1786-1856), surgeon, United States Navy: a pioneer in american naval medicine. *Mil Surg.*

Pleadwell, FL CAPT. "Edward Cutbush, M.D.: the nestor of the medical corps of the Navy." *Ann Med Hist.* □

—Story by André Sobocinski, Historian's Office, Bureau of Medicine and Surgery (M09B7C), Washington, DC.

Barton Bibliography

A Dissertation on Chymical Properties and Exhilarating Effects of Nitrous Oxide Gas and Its Application to Pneumatick Medicine (1808).

A Treatise Containing a Plan for the Internal Organization and Government of Marine Hospitals in the United States: Together with A Scheme for Amending and Systematizing the Medical Department of the United States Navy (1814).

Vegetable Materia Medica of the United States (1818).

Compendium Florae Philadelphiae (1818).

A Flora of North America (1821).

Hints for Medical Officers Cruising in the West Indies (1830).

A Polemical Remonstrance Against the Project of Creating the New Office of Surgeon General in the Navy of the United States (1838) .

Barton Trivia

- Dr. Barton was married to Esther Sergeant the granddaughter of David Rittenhouse, the great American astronomer and President of the American Philosophical Society. Esther Barton colored many of Dr. Barton's botanical drawings.

- The Philadelphia Botanical Club publishes a journal named after Dr. Barton called the *Bartonia*. The publication publishes articles about original research in plant systematics, plant ecology, and plant conservation biology. For more information see:http://www.acnatsci.org/hosted/botany_club/bartonia.html.

- W.P.C. Barton's brother, John Rhea Barton (1796-1871), is the originator of corrective osteotomy for joint ankylosis.

- The Barton bandage (figure eight bandage that provides support below and anterior to the lower jaw), and Barton forceps (obstetrical forceps with one fixed, curved blade and lunged anterior blade for application to a high transverse position of the head) are named after Dr. John Rhea Barton.

- The Barton Collection at Boston Public Library is named after Thomas Pennant Barton (1803-1869), W.P.C. Barton's first cousin. It comprises one of largest and most valuable Shakespeare collections in the world.

- In 1803, before his famous expedition, Meriwether Lewis went to Philadelphia and met with Benjamin Smith Barton. Barton helped to increase Lewis' botanical knowledge and collection skills which obviously worked. Lewis returned with 226 plants. They are preserved today at the Lewis and Clark Herbarium at the Academy of Sciences in Philadelphia.

Letter to the Editor

Sirs:

This is response to the request by LCDR Aboul-Enein for comments on the status of hospital ships as a result of his brief review of an article he commented on in your July-August 2005 issue of *Navy Medicine*. I would draw his attention to the article I authored in the November, 1988 issue of *Naval Institute Proceedings* entitled "Hospital Ships: The Right of Limited Self Defense." At that time the cold war was still "on" and one issue was the vulnerability of a large ship without ECM, chaff, or CIWS to over the horizon ship to ship or air to ship missiles. Given that most anti-ship missiles are fired beyond visual range, and that any large solid radar return is considered a high value target by the shooter (and the guidance systems brain), even a principled enemy would very likely end up targeting a hospital ship.

Additionally I analyzed the possibility of an unescorted hospital ship (the *Mercy* or *Comfort* transiting around Indonesia or the Philippines on a humanitarian mission for example) being attacked by terrorists using a small freighter and anti-tank missiles who would then hijack the ship or kidnap the crew.

As the saying goes, "plus ca change c'est plus le meme chose"—"the more things change, the more they stay the same." A hospital ship without ECM, chaff, and CIWS and/or some sort of anti-small boat defense remains highly vulnerable to attack by the terrorists we are at war with now, and still remains susceptible to anti-ship missiles that can't see the red cross, even if the shooter would not deliberately aim at it.

I said then and say now that the limited self-defense measures enumerated should be taken as analogous to the defensive positions around a field medical unit and the coverage such a unit gets from SAMs located nearby. Putting limited ECM, chaff/flares, CIWS, and some .50 cal or 20mm anti-small boat guns on a hospital ship no more converts it to an offensive weapon than the M9s and M16s carried on board a medical convoy or ambulance convert it in to a raiding force. The United States, in conjunction with other maritime powers such as the United Kingdom, should vigorously press the legal case for this, and ensure that this interpretation is accepted in the Geneva Protocols. However, while this legal proceeding takes place the U.S should declare, hopefully with the concurrence of the UK and other maritime powers, that we are accepting this interpretation and are providing this limited self-defense to our hospital ships present and future.

Any hospital ship, because of the needs for patient transportation, etc., will never have the compartmentalization and survivability of a war-ship. To continue to have hospital ships as bright white sitting ducks is not acceptable.

Thank you.

CAPT Steve Oreck, MC, USNR
Group Surgeon
4th Force Service Support Group

Book Review

Conduct Under Fire: Four American Doctors and Their Fight for Life as Prisoners of the Japanese: 1941-1945 by John Glusman. Viking Press, New York, NY. 2005, 588 pages.

In January, CAPT Murray Glusman, MC, USNR, died at age 91. Dr. Glusman was one of four Navy physicians held as prisoners of war during World War II. In a recently published book, John Glusman tells the story of his father and the three doctors who shared his wartime experiences as they did their best to provide medical care to their fellow POWs while themselves fighting to survive Japanese brutality and starvation. Navy Medicine recently spoke with Glusman about his book.

Your father was a prisoner of war in the Philippines and Japan. Did he talk much about his experiences when you were growing up?

He didn't talk much about it at all. There were one or two stories that I knew as a child. I remember when my father used to open his foot locker that contained his uniform, his medals, and a photograph of the Kobe POW medical staff when he was a prisoner of war in Japan. This was an infrequent occurrence. Maybe it happened once a year, if that. I was intrigued, as any child would be. At the same time, I can only remember one or two stories that he actually told. Friends of his—Bookman and Fred Berley, Navy doctors who were prisoners of war with—became lifelong family friends. I knew Dad spoke with them about their wartime experience when he got together with them. But he shared very little with his family. And that piqued my interest, particularly as I grew older.

He talked about it with his wartime comrades but, like most veterans, didn't really talk about it with his family very much.

No, he didn't. And we didn't push. We didn't pry. Fred, John, and my father all got together once a year or so, and when they did, I knew that war stories were being swapped, told, and retold. But I didn't know the context of the war in the Pacific and I didn't know much at all about the range, the extent, and the extremity of their particular experience. And that's something I wanted to set down on paper.

My father and I went to the Philippines in 2001, where we retraced his wartime itinerary, from the Cavite Navy Yard to Bataan, Corregidor, Bilibid, and Cabanatuan. That trip was the basis of the field research, and it was supplemented by hundreds of hours of interviews with my father and Fred Berley. I already had interview tapes of John Bookman, who died in 1987, from years ago.

The research involved collecting an enormous amount of archival material from BUMED, from the National Archives, from the Naval Historical Center, from the Marine Corps History Museum, from Maxwell Air Force Base. It also involved interviewing dozens upon dozens of—defenders of Bataan and Corregidor, as well as English and Australian ex-POWs. It was a tremendous research effort into the lives these four doctors led during World War II. And it also involved a trip to Japan, which I made separately.

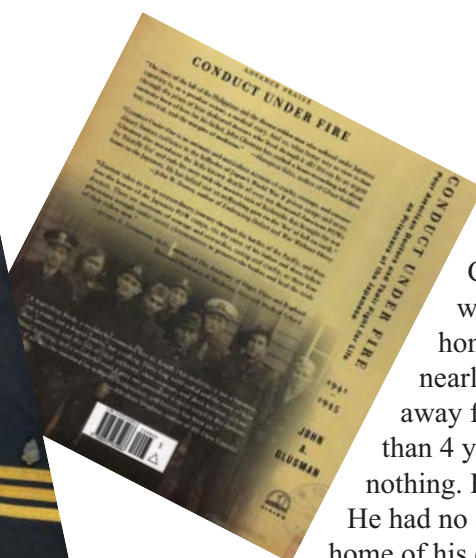
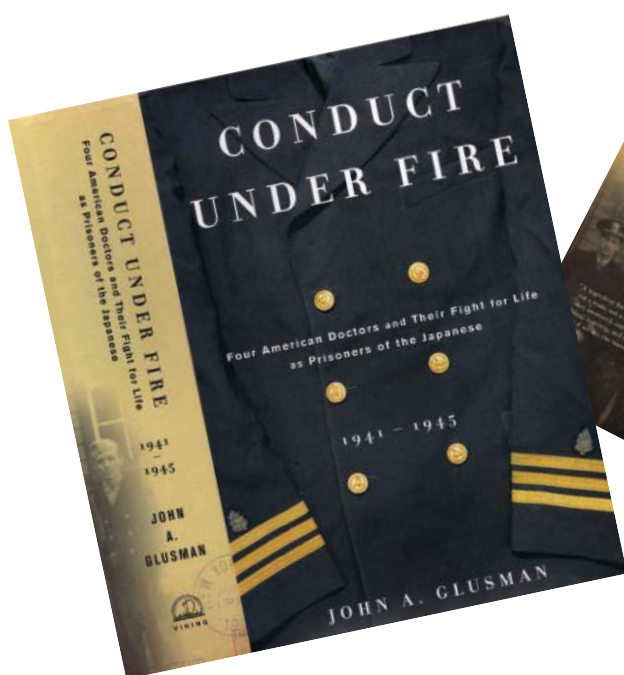
My father had little interest in seeing Japan again, so I went with my Japanese researcher, Ishii Shinpei. We tracked down the location of every POW camp my father had stayed in in Japan from the notorious Ichioka Stadium camp to Tsumori, from Wakayama to the Kobe POW Hospital to Maruyama, where he was last imprisoned before the camp commandant, Dr. Ohashi Hyojiro, announced that Japan had surrendered.

In addition, I worked quite closely with a Japanese translator, John Junkerman, so I could interview Japanese veterans and victims of the American fire-bombing of Japan, and fully explore the family history and biography of Dr. Ohashi, who was extremely helpful to the Allied medical staff of the Kobe POW Hospital.

How did you convince your father to go back to the Philippines with you?

I didn't convince him to go. In fact, my father had been invited by a Filipino defender of Bataan and Corregidor he had met on the 50th anniversary of the end of the war in 1995. Dad was invited back in 2001. And I asked if I could accompany him. He was initially surprised by my interest.

What really started as an article about a trip we were to take together then blossomed into a book. Again he was surprised by my desire to turn the story of his experiences into a book. "The story of Bataan and Corregidor has been told before," he said.



And I replied, “But not your story, nor the story of Fred Berley, John Bookman, and George Ferguson.”

It was George about whom I knew the least. He was the fourth man in this group, but he didn’t survive the war. His was a name I heard very, very late in my own exploration of this subject. And I became fascinated by George’s story, which is the most tragic of the four Navy doctors.

In the course of your research, you were able to meet George Ferguson’s wife, Lucille.

Yes. I was able to locate and meet with Lucille, who provided me with over a hundred letters from George’s time as a Yangtze Patroller—a medical officer of the USS *Guam*. That was enormously useful in terms of getting a picture of what pre-war China was like up until the evacuation of the 4th Marines in November of 1941. But I knew next to nothing about the circumstances of George’s death. And therefore, the story of the hell ship *Arisan Maru* became of great interest to me, which I investigated in depth.

As a result of this project, you probably learned a great deal about your father that you never knew.

I did. I really got to know him as a young man between the ages of 26 and 30. But it wasn’t just that. It wasn’t just who he was and where he was at a particular time. It was the effect the POW experience had on him. And I didn’t fully realize that until we were on

Corregidor and he told me what it had been like to come home, having been a POW for nearly 3 ½ years, having been away from his family for more than 4 years. He felt as if he had nothing. He had no self confidence. He had no sense of place. He had no home of his own. His girlfriend had married another man while he was a prisoner of war. In fact, every girlfriend he had ever had was married and he felt, as he put it, as if he had been on ice for four years.

In addition, his medical career had stalled and it seemed to him as if he had to start over from scratch. The experience was extremely humbling for him, and particularly difficult because he felt as if the people on the home front had no idea what POWs had endured. They weren’t interested in his experience; they couldn’t relate to it. The war was over and they just wanted to get on with their lives. Coming home was very difficult for many ex-POWs, who, all of a sudden, were thrust back into a society that was steaming full speed ahead.

There’s no question that he had a difficult time adjusting. He had been a chief resident in neurology at Welfare Hospital in New York City. After the war, he became very interested in psychiatry. I think that was in part a result of his own attempt to work through some of the problems he experienced in adjusting to civilian life and dealing with the trauma of the war years. Ultimately, he came to specialize in neuropsychiatry with a focus on the neural mechanisms that trigger fear, anxiety, and aggression.

During your formative years, there were probably things about your father you never understood. But I’m sure that when you were finished with the book, there were behaviors he displayed in his everyday life that now you could explain.

Yes. We used to make fun of Dad because of the way he ate. He wouldn’t drink tea, he didn’t like rice, but he’d eat everything on his plate. There was

nothing like watching Murray Glusman consume a chicken. By the end of the meal, you would see this little cradle of bones on his plate. And then he'd start eating the bones. We thought this was downright funny, that this was some quirk of Dad's. And, of course, as a POW, when you're starving, when you're on half rations or quarter rations, you will take every bit of sustenance you possibly can and savor it. This was a visible remnant of his POW experience.

As a young man, Dad was quite anti-authoritarian. He naturally resisted authority. And he had no stomach for pomp and circumstance. At the same time, he emerged as quite an authoritarian character himself. He would go his own way and to hell with the consequences. And sometimes that was behavior that you admired. And sometimes it was behavior that was difficult if it ran contrary to your own thoughts and feelings.

He also had a very stoical attitude towards death. And I wrote about this near the end of the book when a dear friend of mine, who was 22 years old, was diagnosed with a primary tumor of the liver and died 6 months later. I told my father about her death. He said, "That's the way the ball bounces." I was stunned by that response.

"Is that all you have to say?" I asked.

He paused and realized he had spoken too quickly. And he said, "I'm sorry. I've just known football fields of men who have been lost at sea." And he was referring to men like George Ferguson lost on the *Arisan Maru*, and many other officers and corpsmen who were lost on the *Oryoku Maru* and the *Enoura Maru*. That sort of knowledge and experience obviously affected him to the end of his life. I think, to a certain extent, he wondered why he survived and so many others did not. Call it what you may—survivor's guilt. To the end of his life, he thought he was extraordinarily lucky to have "won" the life that he did, but he took nothing for granted in it. He certainly did not expect to live until the age of 90 as he did. And he missed George terribly. That was one of the great losses in his life, he said, just a couple of months before he himself died. John Bookman, who died in his late '70s, was another great loss to him. These were two of his closest friends, his war buddies.

The book has been out now for just a short time, but already it has had an impact on people.

It has generated a fair amount of publicity both in the business and outside the business from a publish-

ing point of view. It's been published by Viking. It's a Book-of-the-Month Club partial main selection. It's a History Book Club dual main selection. It will be offered by the Literary Guild on Father's Day, and then by the Military Book Club.

It's available from Random House in a large type edition and an audio edition. We're already in our second printing. So the book is out there in a very visible kind of way. The early reviews have been very encouraging.

Library Journal called it "essential", and the *Chicago Tribune* said: "America's World War II battles with Japan have been the source of some of the best writing this country has produced...*Conduct Under Fire* adds to this rich and long tradition." These are posted on my website at www.conductunderfire.com.

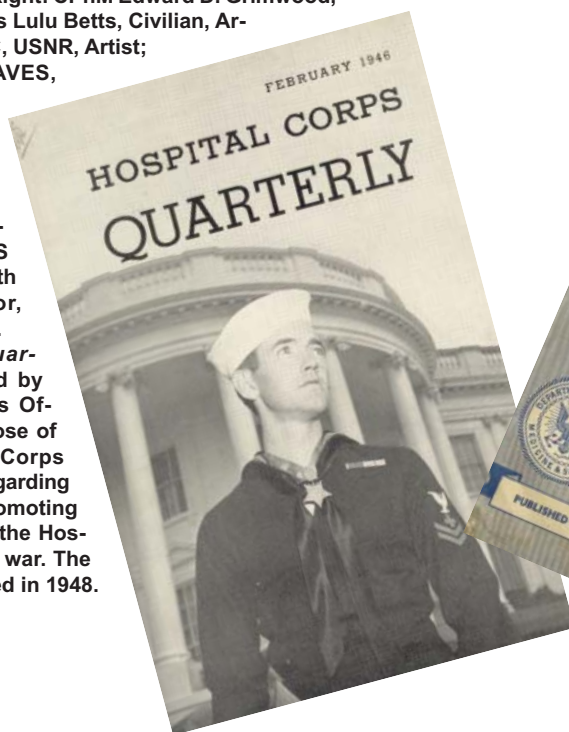
And combined with a national tour, the word gets out and you start hearing from people. You start hearing from relatives of men who have been on Bataan or Corregidor, usually seeking information. They want to know about the battle for Bataan, the siege of Corregidor. They want to know what happened to their father, their grandfather, or their great uncle. Many have contacted me as a result and it's tremendously rewarding because there's a kind of fraternity here. Roughly 8,000 Americans and 4,000 Filipinos were captured on Corregidor on May 6th, 1942 and then entered their first phase of captivity.

Many of these men had similar experiences. And to a certain extent I think—and hope—that's what *Conduct Under Fire* does; it speaks not just for these four Navy doctors, it speaks for the thousands of their comrades who shared similar experiences as POWs. That's one of the reasons my father in his later years began to go to the annual conventions held by the American Defenders of Bataan and Corregidor, even though he didn't know many of the men there personally from the war. He came to know them afterwards and loved to talk about his experiences with them—to share his experience, to reminisce, and exchange anecdotes. And that's exactly what's happening now. I'm delighted to be able to provide information for those wondering about their relatives who served in the Pacific Theater, a chapter of World War II that's all too little known.—JKH □

Navy Medicine 1948



Staff of the *Hospital Corps Quarterly* celebrates the 50th Anniversary of the Hospital Corps. Seated and cutting cake, CPhM Robert Wilson. Standing Left to Right: CPhM Edward D. Grimwood, HC, USNR, Archives; Miss Lulu Betts, Civilian, Archives; Steve Tabone, HC, USNR, Artist; YN3c Ethel Schlein, WAVES, Archives; PhM3c Janet Burke, WAVES, Archives; LT Ben F. Dixon, HC, USN, Archivist and Assistant Editor, *Hospital Corps Quarterly*; Annabelle Decker, WAVES Assistant; LTJG J. Kenneth Patton, HC, USN, Editor, *Hospital Corps Quarterly*. The *Hospital Corps Quarterly* was first published by the BUMED Publications Office in 1917 for the purpose of providing the Hospital Corps with useful information regarding their duties as well as promoting morale and efficiency of the Hospital Corps in the time of war. The journal was disestablished in 1948.



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